Sun Launches Fresh Attack On Low-End Server Market

Price cuts and new hardware with bundled software mark strategy to compete against Intel

BY JAIKUMAR YIJAYAR Sun Microsystems Inc. tomorrow will announce two lowend Solaris servers featuring integrated software stacks that it will position as lower-cost alternatives to Intel Corp. servers running Linux

Sun will also introduce a new family of midrange storage products featuring its NI virtualization and provisioning technologies, according to sources familiar with its plans. i2 Beset by

Restatements.

User group says it still

backs reeling supply

The fortunes of i2 Technolo

the worse last week, as the

ware vendor disclosed that

the Securities and Exchange

Commission has launched a

full-blown investigation of its

struggling supply chain soft-

gies Inc. took another turn for

SEC Probe

BY MARC L. SONOINI



will likely have to make "material adjustments" to its financial results as far back as 1999. In addition, the company warned that it faces a possible delisting by Nasdaq Stock Market Inc. and that it may breach a financial covenant with its bondholders. "12 looks like they could be

chain software vendor in serious financial trouble." said a user at a Fortune 500 company that runs i2's transportation management software. "We're evaluating our options and contineency plans." The user, who asked not to be identified, said he's concerned about what might happen if i2 goes under but added that he thinks another

accounting practices. Dallas-based 12 also said it i2 Technologies, page 12 of the quarterly technology refreshes that Sun promised earlier this year and will also include price cuts and several services-related plans, the sources said. Sun declined to comment in advance on the Sun's new Sun Fire V210

and Sun Fire V240 servers mark a fresh assault on the low end, said Gordon Haff, an analyst at Illuminata Inc. in Nashua, N.H. The systems are based on Sun's UltraSparc IIIi Jalapeno chip, which is optimized for use in low-end

The V210, which measures IU (1.75 in. high), can support two processors, up to 4GB of memory, two drive bays and a PCI slot. Pricing will start at Sun, page 49 port Association. As a result.

Struggling Airlines Scrutinize IT Projects Amid Mounting Losses

Pressure is on to show significant ROI or to boost bottom line

BY DAN VERTON

As they struggle to survive an economic downturn that's being exacerbated by the war in Irao, U.S. airlines are taking an increasingly demanding look at return on investment and "transformational" benefits before funding IT projects.

Already trying to recover from \$18 billioo in losses since the Sept. II attacks, the airlines now face the prospect of losine another \$10 billion and tens of thousands more jobs if the war in Iraq lasts longer than expected, according to the International Air Transthe pressure oo airline IT departments to prove the ROI and cost-reduction benefits of new IT projects has never been greater, according to some industry executives. For example, America West

Airlines Inc. has always focused on ROI before funding new IT projects. But "the rigors, constraints and milestones that you have to meet to move forward with new programs have now

become much more intense," said loe Beery. CIO at America West in Tempe, Ariz. "We've constrained the projects to the

highest ROI you can imagine. America West has increased deployment of service kiosks and recently rolled out a wireless system for "roving gate agents" at Baltimore/Wash-

Airlines, page 49



ROBERT M. LEFKOWITZ, director of open-source strategy at Merrill Lynch, urges companies that rely on open-source software such as Linux to regularly share code patches, modifications and new implementations. The payoff is more stable and reliable software. "If we find a bug or a problem, we're interested

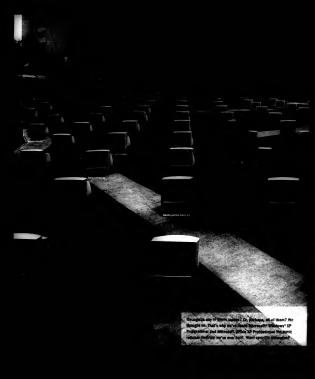
in fixing that problem. We're also interested in not fixing it again in the next version "Lefkowitz says PAGE 37"

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Microsoft

Stuck in D.

Windows XP Professional has an average system uptime that is 10 times better than Windows 98 SE, and 3 times bette Windows NT 4.0, so there are fewer work stoppe With AutoRecovery, Office XP Professional M the curried focusing translations, or generately it the stage or generation steps recogning, so pulse don't yet at their for just don't will the highfack looking for it; Wind more realises to opposed "National Sections of Section 1.



Can your antivirus software provide double the scanning power? Ours can

Making sure your company is secure gets more and more difficult every day. That's why eTrust" Antivirus v7 from Computer Associates uses dual scanning engines to ensure comprehensive virus protection. It processes data in real time to search out and eliminate viruses, and it also scans files during prescheduled and off-peak hours. All at the cost of most single-engine AV products. It's more than just twice the protection. It's twice the people of mind. co com/etrust/antivirus



04.07.03



Running (Exchange 5.5 and 2000) beside each other is costly, so it's better to upgrade fast ROLF HANSMANN, DIRECTOR OF GLOBAL E-MAIL AND COLLABORATION SERVICES.

E-mail Upgrade From the Ground Up

Aventis Pharmaceuticals took three years to complete an upgrade of its e-mail system, which spans more than 50 countries and links 55,000 users. The project served as a catalyst for the company to redesign its entire server infrastructure This step-by-step report on the upgrade offers up lessons that could be applicable to your next big project. Page 25

- 30 Web Sites Take Full Measure level of wireless security in Performance monitoring tools Windows XP. can track your site's activity. but they don't cover every-6 Computer Associates says in
 - thing and can be expensive. will rely on resellers more. 32 CRM With a Family Touch, IBM and Oracle are out to An online genealogy company lure customers away from finds that a self-service CRM
- BEA Systems' application application has cut costs and improved customer service 7 Unisys offers a scaled-down 33 Future Watch: The Ins and
 - version of its ES7000 server Outs of iT. Furnist John with a lower cost of entry. Parkinson says major upbeavals in IT are on the hori-Cisco expands its Catalyst zoo in outsourcing, supply 6500 switch family chains and operating systems
 - 34 Security Manager's Journal Directory Glitch Tries Authentication Efforts. Math ias Thurman has problems implementing two-factor authentication for his company's Unix and NT environments.

MANAGEMENT

- 37 In the Linux Loop, Companies that regularly share code fixes and revisions benefit from more stable and reliable opensource software
- 38 The Lean to Linux. How do you determine your training
- 40 Market Rally, An IT turnaround has brought the world's oldest commodities exchange back to profitability
- 42 The Elevetor Speech. Turn a dreaded encounter into an opportunity for some high-level PR for IT

- 8 On the Mark: Mark Hall looks at the coming battle for (yes) the deskton while he neeks at a new encryption appliance.
- 20 Petricia Keefe wants IT manbility insurance in the form of business-and-IT project committees
- 20 Pimm Fox argues that application service providers lost their luster by failing to live up to the bype. But in these more cost-constrained times. IT may take a new shine to old ASPs
- 21 Michael Gartenberg says you need a Longhoro strategy today even though Longhoro -Windows' next major oew client operating system may oot arrive until 2005.
- 36 Nicholas Petroley thinks be knows what would happen if Perry Mason defended IBM in the lawsuit filed by SCO.
- 43 John Berry says fears that ROI will fall short of its projections prevents IT managers from cooducting postinvestment audits of their projects.
- 50 Frankly Speaking: Frank Harres warns that for the next year, project planning will become even more difficult

DEPARTMENTS/RESOURCES At Deadline Briefs News Briefs 8 10 Letters 21 Company Index 40 How to Contact CW

Shark Tunk

Give Me a Test Hook - or Flee **DEVELOPMENT:** Is it ignorance, paranoia or

pure laziness that keeps developers from tweaking their code to allow for successful automated testing? asks columnist Linda Haves, Outob Job 37501

Database Security Breaches Are on the Rise

STORAGE: Insiders who commit database intrusions often have access codes and a precise idea of the valuable data they want to exploit, cautions Storage Networking World Online. What can you do to protect your compa my? Outobi Jok 37420

Running Windows Apps on Linux OPERATING SYSTEMS: The SCO Group's Opinder Bawa offers advice on getting your Windows applications to run on Linux sys-tems. Oatel in 37025

802.1x Authentication MOBILE/WIRELESS: Reader Jim Burns ex-

plains bow 802.hs authentication works and how it could help promote of wireless. Oxidate to \$7000. Me wider acceptance

Third-Party Security: no Can You Trust CY: It's a courtly exercise to conduct for mal reviews of your bu ess partners' security practices, says privacy colo mnist Jay ed to make the job coasier. Outsid job 27443





Cline. But the British have d

NFWS TECHNOLOGY 6 Microsoft moves to boost the

Many U.S. companies hold

the line on IT hiring during

the fourth quarter And tine

iob market isn't expected to

improve much this year

9 Dell and Oracle try to build a

10 3Com's strategy to recenter

based IP switch

Brocade switches

MEETS SIV.

the enterprise server market

yields a high-end, software-

EMC is the latest vendor with

plans to put its storage man-

agement software on new

A securities trade group

wants the SEC to drop the

WORM archiving require-

12 Melding IT security with non-

IT corporate security func-

tions can yield real benefits.

clusters.

case for user adoption of Ora

cle databases running on Dell

HealthSouth CIO Fired Over Finances

HealthSouth Corp. in Birming-ham, Ala., said it fired CIO Kenneth Livesay after he pleaded ilty to federal charges of faisi ying financial information and repiracy to commit wire and rities fraud. Livesay was one of five HealthSouth executives a dilw noits no to artificially inflate the health care company's earnings and to file false financial statements with the government.

Microsoft to Alter XP's Start Menu

Microsoft Corp. said R will give a more prominent place in the Windows XP start menu to a program that helps users set cts from other vendors as heir default software. The comry agreed to make the chang as part of its antibout settl dings with the U.S. De nent of Justice. The DOJ ined to comment, other than to say that it's working with Miit to address issues that arise in this process."

Sybase, PeopleSoft Say Q1 Below Plan

ybase Inc. in Dublin, Calif., and Soft Inc. in Pleasa Call, both warned that their "will oot even have to think about," Rhaymoni said first-quarter financial results will be lower than expected. Sybase CEO John Chen said users deerred "numerous" planned soft ere purchases because of eco omic concerns. PeopleSoft reted similar purchasing delaws.

Network Associates **Buving Two Vendors**

Natural Associates Inc. in Santa Clare, Calif., said it plans to buy that self introvion-preinchnology, Notwork Associates will pay \$120 million in cash to

AT DEADLINE | Microsoft Adds Wireless Security Support to XP

Free software replaces less secure WEP with new Wi-Fi Protected Access specs

TOROSOUT CORP last week added support for La ocw set of wireless LAN secur-

ity specifications to Windows XP, and WLAN hardware that uses the same specs is expected from several vendors later this month Microsoft said software that complies with the Wi-Fi Pro

tected Access (WPA) security mechanisms can be down loaded from its Web site for free. WPA. which was developed by Microsoft and other vendors under the auspices of the Wi-Fi Alliance trade group. will replace the older and less secure Wired Equivalent Privacy (WEP) security standard that XP now supports

Sam Bhavnani, an analyst at ARS loc. in La Jolla, Calif. said security remains corpo rate users' No. I concern about Wi-Fi technology. Microsoft's decisioo to build WPA sunport into Windows XP should help alleviate those coocerns because it will provide enhanced security that end users

Other Choices But Dave Sankey, director of process technology development for the product repair service division at Sears. Roebuck and Co., said some Wi-Fi security tools already on the market are at least as good as the WPA-compliant ones, For example. Sears has deployed to its service technicions 10,000 notebook PCs that are equipped with Wi-Fi connections and use security middleware from IBM that Sankey

called "as good as WPA." WPA, which was announced in October, is an interim set of specifications that its backers

hope can bridge the can betweeo WEP and a draft 802.11i WLAN standard that a working group within the Institute of Electrical and **Electronics Engineers**

Inc. is expected to com-

plete by next war. The specifications prescribe the use of the Extensible Authentication Protocol to determine the identities of and

rate Wi-Fi networks, WPA also replaces the static oncryption keys in WFP with

of the 802.11i proposal. Microsoft's move dovetails planned for this month's Netfy how many vendors plan to

harder-to-crack dynamic keys based on the Temporal Key Integrity Protocol, which is part Wi-Fi Alliance officials said with hardware announcements world+Interop conference. Brian Grimm, a spokesman for the trade group, declined to speciintroduce WPA-certified hardware at N+L but he said it would "be more than five." Companies that previously said they plan to support WPA include Gisco Systems

Inc., Hewlett-Packard Co. and Sunnyvale, Calif.-based Proxim Corp. Bill Carney, a vice president at Texas Instruments Inc. and a

member of the Wi-Fi Alliance's board, said that starting in August, the trade group woo't out its certification stamp on any new Wi-Fi hardware that does not support WPA.

SECURE SWITCH Note: Networks announced a WLAN partici-

with built-in weeless security leatures: QuickLink 37567

CA to Hand Off More Users to Resellers

Changes sales strategy for three software lines

producte

As part of the

changes, which

the start of CA's

new fiscal year.

niowes world

wide over the

BY MARC L. SONDING Computer Associates International Inc. last week announced restructuring moves in its IT services and indirect sales organizations, including a plan to put more emphasis on using channel partners to sell some of its key

prefer to deal with CA directly. were disclosed at ... That relationship is imthe software venportant to us. dor said it will lay off about 450 am ANDREW WINER, CO.

MYERS INDUSTRIES INC next few mooths. That's about

3% of its workforce of 16,000. The products that will be more frequently handed off to resellers include CA's eTrust. BrightStor and AllFusion lines, which support security, storage and application lifecycle management, respectively. The company plans to

channel partners and let them take the lead in the selling process, said George Kafkarkou, senior vice president of CA's worldwide channel oper-

Customer Contact The new approach is largely peared toward small and midsize businesses, Kafkarkou said, adding that

company officials hope the increased focus on resellers will help CA take over the top spots in the storage and security

markets **But Andrew** Winer, CIO at Myers Industries Inc. in Akron, Ohio, said he

wouldn't want to give up his existing relationship with CA's sales force. "I prefer to deal with CA directly," he said. "Our account team at CA. whether sales, service or cus er satisfaction, all know us. That relationship is impor-

Myers, which makes plastic and rubber goods, uses CA's CleverPath husiness intellisence software. For some products, it might not matter who the seller is. Winer said. but the cootacts that Myers deals with at CA already know the company and its history He said he's also oot sure whether resellers would nevo-

tiate on price to the same extent that CA does Kafkarkou said that in some cases, users will be able to keep their accounts CA-only if they want to do so. However, he pointed out that some of CA's products, such as its ARCserve data protection software, are already sold by resellers only CA also said it's combining

its presales technical support and professional services organizations into a single unit as part of a previously disclosed plan to narrow the focus of the company's IT services offerings to its own products. The new unit, CA Technology Services, will be responsible for the company's user training services as well. CA said the services operation has about 2,500 employ-

ees and will work closely with the sales force in an effort to reduce the time it takes users to get returns on their investments in the company's software.

Try to lure users away from rival's application server

BY CAROL SLIWA There is really no subtlety to the attacks that IBM and Oracle Corp. are hurling at rival BEA Systems Inc. Oracle last week directed a "switch-and-save" migration

program squarely at users of BEA's WebLogic application server. At no charge, BEA customers will be eligible to swap their WebLogic per-processor enterprise licenses on a onefor-one basis for per-processor licenses of Oracle's 9i Application Server Java Edition, which was introduced last week. Oracle experts will even bein those BEA users with their migra-

tions, the company said. Meanwhile, this week at its developerWorks Live conference. IBM will release a free plug-in that will let users of its WebSphere Studio develop-

ment environment test and Lighter Side

WebLogic application server. An IBM spokesman acknowledged that the newly added support for WebLogic will make it "easier to migrate

from WebLogic to Web-Sphere," in addition to making the tools wallable to a broader spectrum of developers Carl Sjogreen, senior prod uct manager of WebLogic Workshop, welcomed support from other tool vendors to help

developers build applications to run on the BEA platform. "Users arel going to see the merits of our platform underneath," he said. It's no secret that IBM and BFA have been embroiled in a beated battle for the lead in

the application server market. with Oracle trailing in third place. But so far. BEA hasn't made a serious play in the tools market.

That will change this summer when BEA releases the second, more all-purpose version of its WebLogic Workshop, which will work across all of the company's products. The first release was only for building Web services.

Craig Roth, an analyst at Meta Group Inc. in Stamford, Conn., said he doesn't think IBM will find many takers to develop in WebSphere and deploy on WebLogic, Roth said be would consider "the shot from IBM ... to be a compli

BEA and WebLogic Workshop." the company says will let Oracle, which doesn't have much of a presence in the anplication server market, likely sees BEA as a more vulnerable target than IBM. Roth added "With BEA, you feel you are attacking an architecture group or an infrastructure group that you may have a chance of actually swaying," he said. "You can't

sway a CEO with a switch-andsave offer, and IBM often makes handshake deals at that level. But Mike Gilpin, an analyst at Forcester Research Inc. in Cambridge, Mass., said BFA generally takes good care of its stomers. "Most of their customers that I run into are quite happy and loval," he said.

Gilpin said that although Ovacle's application server has improved significantly, the product generally has held appeal only for Oracle's database and application customers

Lightening Up

That's exactly the grounds on which Oracle is hoping to sway BEA customers. If they're already using Oracle's Astabase server, they may want to get their application server from the same vendor, said John Magee, Oracle's vice president

of product marketing Oracle sells a standard edition of its application server, at \$10,000 per processor, that includes portal and content management capabilities. Its

Unisys Corp. today will an-

nounce a variation of its Win-

dows-based 32-way enterprise

sign configuration intended to

At its data center lab here.

part of its ES7000/500 "Dylan"

line to show off a new design

configuration. The processors

are built in modules, which

Unisys last week previewed

attract midrange users

server that has a price and de-

Unisvs ES7000 Features

New Design, Entry Price

enterprise edition, priced at \$20,000 per processor, includes features such as a directory infrastructure, security, caching and wireless capabilities. The new lighter lava Edi-

tion, which sells for \$5,000 per CPU, features support for core Java 2 Enterprise Edition technology, an HTTP server, five seats of the company's [Developer tool and the TopLink object-to-relational persistence software that Oracle acquired last year from WebGain Inc.

Magee said Oracle's new lava Edition has more capabilities than the Express prodnots from RFA and IRM. He said Oracle can give away the lava Edition to BEA customers because its long-term business model is based on the 'extended middleware functionality," such as portal, integration and

users quickly assemble large

fashion in a matter of hours

ously available with a mini-

ine at about \$80,000. Univers is

now offering a four-way ver-

sion with a starting price of

ing it a "pay-as-you-grow"

\$35,000. The company is call-

systems in building-block

business intelligence, in its higher-end versions Erik Stahl, BEA's director of product marketing, said he "al-

most pever" sees Oracle in the sales cycle. He added that he has witnessed similar Oracle campaigns in the past. "It's an acknowledgment of our leadership in the space," he said BEA last week announced the availability of WebLoric

Server 8.1 and its JRockst 8.1 chine that's optimized to run on the Intel Corp. architecture. DEVELOPERWORKS LIVE

EM will arrounce at the story one sol OutchLink 37578

IBM will hold a coming out party for its newly acquired tool line from Rational

ested in having a symmetrical multiprocessing server enviconment but have been scared off by the price, said Jean Bozman, an analyst at IDC. According to the research firm worldwide server revenue has fallen from \$60 billion in 2000 to \$44 billion in 2002 as a re-

The ES7000, which can scale up to 32 processors, was previsult of the economic downturn Unisys also has upgraded its mum of eight processors, start-Server Sentinel management tools with features that include self-healing functions 9

DHE ON OHE Summer? and no Web no. The move may be attractive

To read an enterwave with Lineau Goorg

to IT managers who are inter-Microsoft Reveals Office Packaging Options like Word, Excel, Outlook

BY CAROL BLIWA Microsoft Corp. last week unveiled the packaging options that will be available for its Office System 2003 family of applications, which is due this

Simon Marks, a product manager at Microsoft, said he expects that the majority of corte customers will get the Office Professional 2003 Enterprise Edition, which comes with their volume licenses The Enterprise Edition includes familiar applications

PowerPoint and Access But it will also include InfoPath, a new product that allows users to create and complete XMLbased forms and submit them to XML-enabled systems: Business Contact Manager the desktop Publisher tool; support for customer-defined XML schema; and support for Information Rights Man ment content creation and authoring canabilities.

The Office Professi 2003 version that will be avail-

able through hardware makers and retail and academic vales

channels will include everything in the Enterprise Edition except InfoPath Another new Microsoft product, the OneNote digital

note-taking application that can he used on laptops, desktops and Tablet PCs, will be sold as a stand-alone product Pricing for the Office family of products has yet to be an-

nounced. However, Marks said prices won't change significantly from past versions.

Dell Stands by 01 Growth Goals

Dospite the war in Iraq and con Dell Computer Corp. said it excts to meet targets of double pit growth in revenue, unit shipments and earnings during its first quarter. Dell reaffersed its prediction that revenue will increase 18% year over year in the first quarter, which will end April 30. The company expects a % kump in earnings per share.

Peregrine Amends

Bankruptcy Course regrine Systems Inc., an asser ian Diago, filed a revised reoration plan with the U.S. skruptcy Court is Delaware after talks with its creditors. Some of the creditors now sup-port the plan, Peregrine said, but he official committee of unnecured creditors still appears it, and the judge overseeing the

Sprint Plans IP Network for Feds

Sprint Corp. announced plans to learnch a private IP network for use an an intrared by security ious U.S. government es. The company said the out network, which is se to be ready by midyear, will for most of the same function ly an its SprintLink corpora hone but won't include open to the exhibit leterne

Short Takes

HEWLETT-PACKARD CO. out the prices of its midrange Unix rvers by about 20% and so it will offer users free in-factory configuration services, including satup of system partit

SUSE LINUX A8 in Nore burg, Germany, said it has de laved its shipment of an enterse deaktop version of Linux on the first quarter to June

MARK HALL ON THE MARK

NFWS

Sun, Apple Ignite New Desktop Skirmish...

.. with Microsoft Corp. While it's doubtful that either company will be able to unseat Windows' monopoly status in the PC market, you've got to admire their pluck. Sun Microsystems Inc.'s attack on Microsoft's desktop fortress is called Project Mad Hatter [QuickLink 36292] and uses Linux combined with StarOffice and other open-source

goodies. Although most of the attention has been given to Sun's embrace of Linux and open source, the real story is about hardware. John Loaicano, vice president of Sun's operating platforms group, says, "The advantage of Linux is its low-cost hardware," Translated: Intel Corn, hardware will always be cheaper than Ultra-Sparc systems. After all, Sun could have pushed Linux on its own microprocessor. since there are numerous versions running on it (see www.ultralinux.org), but Sun opted for Intel IA-32 chips, Sun's Intel

hardware story gets more interesting. According to Logicano, Sun will stop its "Lucy-and-the-football approach with Solaris on x86." While the effect of Solaris running on Intel hardware may not dent the Windows desktop monopoly, it may slow Linux's incursion

into Sun's territory. Thomas Cunningham CEO of Baltimore-based Alabanza Corp., says he'd consider returning to Solaris "if the hardware were less expensive." His company uses 1,000 In-

tel-based Linux servers in its Web hosting ceoter, which he rap for three years on Sun systems until the costs got out of hand. Cunningham prefers Solaris bec the performance is better. So he might be pleased to hear Loaicano say that Sun's price for Solaris or Linux on IA-32 systems "will be the same." . Apple Computer Inc. has long been the only serious alternative to Microsoft's approach to the desktop. In large measure that's because Macintosh has been the only other platform that can run the Microsoft Office

Suite natively. It has also meant that Apple has be captive to Microsoft's comsent to the Mac, which seems to be in constant opardy because Office for the Mac contributes so little to Redmond's overflowing coffers. For years. Macs have come bundled with Apple-

Works, a usuble Office alternative but the suite has lacked an equivalent to PowerPoint. This has left Mac-loving marketers without their es sential tool, so many have switched to Windows.

With the arrival of a \$99 package called Keynote, Apple has a solid alternative for

those Mac lovers who want to create presentations. Keynote is fast and easy to use, but more important, it reads in and exports out PowerPoint files flawlessly. it's so good, it may make Microsoft wonder why it oceds to continue supporting the Mac. . Another interesting conflict is browing among the companies bettling to take the lead in Web services management. Ed Horst, vice president of marketine at AmberPoint Inc. in Oakland, Calif., claims that enterprise application designers using Web services will want to use products like AmberPoint's Management Foundation to control content with business logic as well as oversee the health of the Web services themselves. That strikes

John Hanger, senior vice president of sales and marketing at competitor Flamenco Networks Inc. in Alpharetta, Ga., as a mistake. Although he says Flamenco WSM Enterprise Edition can also manare content. Web services management "is the wrong place to put business rules." He compares products like his and AmberPoint's with OpenView and Tivoli. which manage networks, not the data numing on the networks. Horst dismissed the point. Setting business managers in-volved in Web pervious is what will make

them a success, he says. Stay tuned. · Data encryption is one of the best ways to protect your information. But is has aiways caused a major performance per The folks at cinberOntics Inc. in Ruleich N.C., claim that their Security Gateway appliance licks that problem. It does triple-DES encryption and coarse packet filtering and handles endpoint authentication of systems while humming along with two lGbit/sec. ports. In June, the ap pliance will sport an option for the Advanced Encryption Standard and a global policy configuration manager, adding ease of use to its speediness.

Cisco Upgrades Catalyst 6500 Switch Line BY MATT HAMBLEN The new offerings stand to solidify the company's market

Cisco Systems Inc. last week unveiled six modules and other technology upgrades for its Catalyst 6500 Series switches. including a new processing engine that the company said will nearly triple the performance of its existing switches. Cisco already controls about 70% of the worldwide switch market with the Catalyst line, according to loci

Conover, an analyst at Current

Analysis Inc. in Sterling, Va.

prominence, he said The upgrades should also belp spur migrations to devices that support up to Gigahis Ethiornos transmission rates in wiring closets and 10 Gigabit Ethernet in core networks, Conover said. Cisco has created a "well laid-out migration path," he said.

These announcements give [users] some of the best performance in the industry." support 10 Gigabit Ethernet

Conower added that Circola pricing could also boost 10 Gigabit Ethernet, which is now confined largely to research and supercomputing ceoters. For example, Cisco announced a four-port 10 Gissbit Ethernet module that costs \$20,000 the same price as a device with four Gizabit Ethernet ports.

However, the Catalyst line "Is still very expensive." Conover said. He noted that a 6500 chassis configured to

Cisco said its new Supervisor Engine 720 module is priced at \$28,000 and provides forwarding functions for 40 ports of Gigabit Ethernet or four ports of 10 Gipphit Ethernet. The processing engine can move data at speeds up to 720Gbit/sec., compared with 256Gbit/sec. on the 2-year-old model that it's replacing.

can cost as much as \$300,000.

Other additions to the 6500 line include a 16-port Gigabit Ethernet module for data centers and a carrier-class 10 Gigabit Ethernet module with two ports, Cisco said.

War, Economic Woes Put Drag on IT Hires

Report says fourth-quarter hiring was down compared with earlier quarters

FAR BURINESS conditions and fears about the potential impact of a war with Irao led many U.S. companies to hold back on hiring IT employees during last year's fourth quarter, according to a report released last week.

The report by Dice Inc. and the Information Technology Association of America (ITAA), which conduct quarterly surveys of more than 300 hiring managers, says companies added fewer techpology workers from October to December than they did in each of the previous three quarters. A total of 265,000 FT workers were hired in the fourth quarter, while 168,000 were let go - a net gain of

97000 inha The job market isn't expected to change much for the better this year, according to the report. Dice and the Arlington, Va.-based ITAA predicted that companies will hire a total of about 874,000 IT workers

this year

"January was very strong for recruiting, [but] hiring has pulled back since then, largely driven by the economy and the situation in Iran " said Scot Melland, president and CEO of Dice, a New York-based provider of online recruiting services for IT professionals

No Recovery Yet

Some IT executives said the findings jibe with their current workforce strategies. "Our hiring plans have decreased," said Malcolm Fields. CIO at HON Industries Inc. The Muscatine, Iown-based maker of office furniture and fireplaces was anticipating an economic recovery "that hasn't come," Fields said. As a result, all hiring within HON's IT department has been put on hold, with the exception of a few replacement workers. Diane Morello, an analyst at Stamford, Conn.-based Gartner Inc., said she expects IT

hiring in the U.S. this year to be even weaker than what Dice and the ITAA are forecasting. They "subtly assume that demand will be filled by permanent hires in the U.S. Morello said, characterizing that as a false assumption. The increasing shift of IT

work offshore "shows how companies are filling demand - at considerably lower frompensation) rates" than they would have to pay U.S. workers. Morello said. She added that many IT managers are increasing their reliance on contract labor and supplemental

staffers as part of their efforts to control variable costs Tom Pohlmann, an analyst at Forrester Research Inc. in Cambridge, Mass., said he expects IT staffing levels to remain flat overall on a year-toyear basis. Even if the clamps

are taken off of technology budgets, IT departments "will still be pressed over the medi-

um term to deliver more with less," he said. It's also far from certain that companies will free up their

spending on IT this year. Framingham, Mass, based IDC casting a growth rate of 2.3% for worldwide IT spending in 2003, down from an earlier prediction of 3.7% growth.

Losses Drop

Although fewer IT workers were hired during the fourth quarter than in previous periods, there were also fewer job losses, according to Dice and the ITAA. By comparison to the 168,000 IT workers who were let go in the fourth quarter, 211,000 were dismissed during the third quarter, and about 350,000 were pared during both the first and second quarters, they said.

At year's end, there were

about 10.2 million IT workers in the U.S., Dice and the ITAA said. That's a 3.3% rise from the number at the start of

2002 8

Dell. Oracle Team on Non-Unix Clustering

Duo wants users to migrate servers

BY PATRICK THIRDDE AN Dell Computer Corp. CEO Michael Dell and Oracle Corp. CEO LETTY Ellison sat shoulder to shoulder last week to detail a growing alliance built around selling clustered server systems to enterprises. Their message: RISC/Unix

systems are being relegated to niche statue "There is no question that standardization is increasingly taking hold in an increasingly large portion of the enterprise rtunity," said Dell

Dell's strategy is to sell servers primarily using two to four processors that can be combined, or clustered, to boost processing power. A key component of that strategy is Oracle%'s ability to run on such clustered systems. The Dell/Oracle partner

ship is aimed at easing the migration from RISC/Unix systems to Windows and Linux. Prices will depend on project requirements, but a mistration

to Oracle% that takes 10 days would cost about \$35,000. Dell is already a major reseller of Oracle databases on its servers, but the two companies hope their migration services, coupled with a price that begins at about \$18,000 for the cluster, will draw even more customers

Broadening User Options Oracle, which depends heavily on revenue from Unix users, said the strategy is intended to give users more choices. "The Linux strategy does not supercede what we are doing with Unix," a

spokesperson said. Charlie Garry, an analyst at Meta Group Inc. in Stamford. Conn., said the risk of Oracle allenating its Unix users is low because Oracle "already owns that market, and all the major Unix vendors are jumping on the Linux bandwagon as well.* While users at the launch ported the approach, Dell's

enal to replace RISC/Univ benefit. vendors in the enterpris could raise costs, said Steve Randich, CIO of Nasdag Stock Market Inc. in Washington.

tier of reliability, but commodity vendors aren't going to try to fill that niche because they

don't have the economic incentive to do so be said Randich is a heavy Dell user, but he said he fears that if vendors of high-performance systems are resched out of the mainstream, "they are going to have to drive up the

price for that (highly reliable systemi in order to maintain a reasonable profit." If that hanpens, he said, it "will compel firms like ours to use standard

The more open source. the more openstandards-based it is, the more flexibility I have, the more choices I have And that to me is a huge

ANDY MILLER DIRECTOR OF METWORK OPERATIONS WYNCHAM INTERNATIONAL

solutions in order to meet the cost and economic requirement, but then customize our applications to close that reliability gap."

Andy Miller, director of network operations at Dallasbased hotel and resort operator Wyndham International Inc., is running a variety of operating systems, including IBM's AIX and Sun Microsys

Solaris is a prime candidate for replacement with a combination of Dell hardware and Linux because of price Miller said. A proprietary Unix system "locks me in as the consumer of those products into

very specific, regulated growth models," said Miller. "The more open source, the more open-standards-based it is, the more flexibility I have, the more choices I have. And

that to me is a huge benefit." Ed Woiciechowski, CIO of Menasha Corp., a Neenah, Wis-based maker of packaging and other products, said he welcomed the move

"Our model is Linux, Dell and Oracle," Woiciechowski said. "So anything that brings those closer together we think is a benefit and fits our busi-

RRIFFS

Dell Stands by Q1 Growth Gnals Despite the war in Iran and con-

uing economic uncertainty, Delt Computer Corp. said it expacts to most tarnets of doubledigit growth in revenue, unit nts and earnings during its first quarter. Dell reaffirmed its prediction that revenue will increase 18% year over year in the first quarter, which will end April 30. The company expects a 35% jump in earnings per share.

Perenrine Amends **Bankruptcy Course**

Percerice Systems Inc. on asset ent software vendor in ego, filed a revised recezation plan with the U.S. tcy Court in Delaware after talks with its creditors. ome of the creditors now su port the plan, Peregrine said, but the efficial committee of unsecured creditors still opposes it. and the judge overseeing the

Sprint Plans IP letwork for Feds

launch a private IP network for use as an intranet by securitycious U.S. government ties. The company said the ent network, which is due to be ready by midyear, will offer most of the same functionality as its SprintLink corporate P backbone but won't include astructus to the nublic internet

Short Takes

HEWLETT-PACKARD CO. cut the prices of its midrange Unix ervers by about 20% and said it will offer users free in-factory on services, inch the setup of system partiti

. . SUSE LINUX AG in Murem burg, Germany, said it has dered its shipment of an enterprise desktop version of Linux from the first quarter to June.

MARK HALL ON THE MARK

Sun, Apple Ignite New Desktop Skirmish...

with Microsoft Corp. While it's doubtful that either company will be able to unseat Windows' monopoly status in the PC market, you've got to admire their pluck. Sun Microsystems Inc.'s attack on Microsoft's desktop fortress is called Project Mad Hatter [QuickLink 36292] and uses Linux combined with StarOffice and other open-source

goodies. Although most of the attention has been given to Sun's embrace of Linux and open source, the real story is about hardware. John Logicano, vice president of Sun's operating platforms group, says. "The advantage of Linux is its low-cost hardware," Translated: Intel Corp. hardware will always be cheaper than Ultra-Sparc systems. After all, Sun could have pushed Linux on its own microprocessor. since there are numerous versions running on it (see www.ultralinur.org) but Sun pated for Intel IA-32 chins, Sun's Intel

hardware story gets more interesting According to Loaicano, Sun will stop its "Lucy-and-the-foothall approach with Solaris on x86." While the effect of Solaris running un Intel hardware may not dent the Windows desktop monopoly, it may slow Linux's incursion into Sun's territory. Thomas Cunningham.

CEO of Baltimore-based Alabanza Corp., says he'd consider returning to Solaris "if the bardware were less expensive." His company uses 1,000 In-

Veritas NetBackup and many

tel-based Linux servers in its Web hosting center, which he ran for three wears un Sun systems until the costs got out uf hand. Cunningham prefers Solaris because the serformance is better. So he might be pleased to hear Loaicano say that Sun's price for Solaris or Linux on IA-32 systems "will be the same." . Apple Computer Inc. has long been the only serious alternative to Microsoft's approach to the desktop. In large measure that's because

Macintosh has been the only other plat-

form that can run the Microsoft Office

meant that Apple has been captive to Microsoff's commitment to the Mac, which seems to be in constant leonardy because Office for the Mac contributes so little to Redmond's overflowing coffers. For years. Macs have come bundled with Apple-Works, a usable Office alternative, but the suite has lacked an equivalent to PowerPoint. This has left Mac-loving marketers without their esswitched to Windows.

Suite natively. It has also

With the arrival of a \$99 package called Keynote. Apple has a solid alternative for those Mac lovers who want to create presentations. Keynote is fast and easy to use, but more important, it reads in and exports out PowerPoint files flawlessly It's so good, it may make Microsoft won-

der why it needs to continue supporting the Mac. a Another interesting conflict is browing among the companies battling to take the lead in Web services management. Ed Horst, vice president of marketing at AmberPoint Inc. in Oakland, Calif. claims that enterprise application designers using Web services will want to use products like AmberPoint's Management Foundation to control content with burnness logic as well as oversee the health of the Web services themselves. That strikes John Hanger, senior vice president of sales and marketing at competitor Fla menco Networks Inc. in Alpharetta, Ga., as a mistake. Although he says Flamenco WSM Enterprise Edition can also manage content. Web services management "is the wrong place to put business

rules." He compares products like his and AmberPoint's with OpenView and Tivoli. which manage networks, not the data running on the networks. Hurst dismisses the point. Getting business managers involved in Web services is what will make them a success, he says. Stay tuned. . Data encryption is one of the best ways

to protect your information. But it has always caused a major performance penalty The folks at cipherOptics Inc. in Raleigh. N.C., claim that their Security Gateway appliance licks that problem. It does triple-DES encryption and coarse packet filtering and handles endpoint authentication of systems while humming along with two IGbit/sec. ports. In June, the appliance will sport an option for the Advanced Encryption Standard and a glubal policy configuration manager, adding ease of use to its speediness.

Cisco Upgrades Catalyst 6500 Switch Line

Cisco Systems Inc. last week or technology upgrades for its Caralyst 6500 Series switches, including a new processing engine that the company said will nearly triple the performance of its existing switches. Cisco already controls about 70% of the worldwide switch market with the Catalyst line, according to feel Conover an analyst at Cornent Jusers) some of the best per-Analysis Inc. in Sterling, Vs. formance in the industry."

The new offerings stand to selidify the company's market prominence, he said. The upgrades should also help spur migrations to devices that support up to Gigabit Ethernet transmission rates in wiring closers and to Gigabit Ethernet in cure has created a "well laid-out migration path," he said. These announcements give

Conover added that Cisco's pricing could also boost 10 Givahit Ethernet, which is now confined largely to research and supercomputing centers. For example, Cisco announced a four-port IO Gieabit Ethernet module that costs \$20,000, the some price as a device with four Gigabit Ethernet ports.

However, the Catalyst line "is still very expensive," Conover said. He noted that a 6500 chassis configured to support 10 Gigabit Ethernet

can cost as much as \$300,000. Cisco said its new Supervisor Engine 720 module is priced at \$28,000 and provides forwarding functions for 40 ports of Gigabit Ethernet or four ports of 10 Gigabit Ethernct. The processing engine can move data at speeds up to 720Gbit/sec., compared with 256Gbit/sec. on the 2-year-old model that it's replacing Other additions to the 6500 line include a 16-port Gigabat Ethernet module for data cen-

ters and a carrier-class 10 Gi-

gabit Ethernet module with

two ports. Cisco said. 9

last year as a whole, with jobs in creasing 6.2%

The most in-demand IT skills tinue to be Java, SQL, C, C++

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he welcomed the move 'Our model is Linus, Dell and Oracle," Woiciechowski said. 'So anything that brings those closer together we think is a benefit and fits our business model." •

War, Economic Woes Put Drag on IT Hires

Report says fourth-quarter hiring was down compared with earlier quarters

BY THOMAS HOFFMAN T LAK BUSINESS conditions and fears about the potential impact of a war with Iraq led many U.S. companies to hold back on hiring IT employees during last year's fourth quarter, according to a report re-

leased last week The report by Dice Inc. and the Information Technology Association of America (ITAA), which conduct quarterly surveys of more than 300 hiring managers, says companies added fewer technology workers from October to December than they did in each of the previous three quarters. A total of 265,000 FT workers were hired in the fourth quarter, while 168,000 were let go - a net gain of 97,000 jobs.

The job market isn't expected to change much for the better this year, according to the report. Dice and the Arlington, Va-based ITAA predicted that companies will hire a total of about 874,000 FT workers

"January was very strong for recruiting, [but] hiring has pulled back since then, largely driven by the economy and the situation in Iraq," said Scot Melland, president and CEO of Dice, a New York-based provider of online recruiting services for IT professionals.

No Recovery Yet Some IT executives said the

findings jibe with their current workforce strategies. "Our hiring plans have decreased" said Malcolm Fields. CIO at HON Industries Inc The Muscatine, Iowa-based maker of office furniture and fireplaces was anticipating an economic property "that hasn't come," Fields said. As a

result, all hirner within HON's IT department has been put on hold, with the exception of a few replacement workers. Diane Morello, an analyst at Stamford, Conn.-based Gartner Inc., said she expects IT hiring in the U.S. this year to be even weaker than what

Dice and the ITAA are forecasting. They "subtly assume that demand will be filled by permanent hires in the U.S. Morello said, characterizing

Duo wants users

BY PATRICK THIBODEAU

Dell Computer Corp. CEO

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Their message: RISC/Unix

Michael Dell and Oracle Corn

to migrate servers

companies are filling demand. at considerably lower from pensation| rates" than they would have to pay U.S. workers. Morello said. She added that many IT managers are increasing their reliance on contract labor and supplemental to control variable costs.

staffers as part of their efforts Tom Pohlmann, an analysi at Forrester Research Inc. in Cambridge, Mass., said he expects IT staffing levels to remain flat overall on a year-toyear basis. Even if the clamps are taken off of technology

Dell, Oracle Team on Non-Unix Clustering to Oracle% that takes 10 days would cost about \$35,000

> Dell is already a major reseller of Oracle databases on its servers, but the two companies hope their migration services, coupled with a price that begins at about \$18,000 for the cluster, will draw even more customers.

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goal to replace RISC/Unix vendors in the enterprise could raise costs, said Steve Randich, CIO of Nasdaq Stock Market Inc. in Washington

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ANDY MILLER DIRECTOR OF NETWORK OPERATIONS WYNDHAM INTERNATIONAL

ing both the first and second that as a false assumption. budgets. IT departments "will quarters, they said. The increasing shift of IT still be pressed over the medi-At year's end, there were

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thousands of dollars more io

IT management costs with

saved \$3,000 per month in long-distance charges and

BRIEFS

Judge Dismisses GTE's Y2k Suit

A U.S. District Court lusion in New Jersey has dism \$361 million learnest that the for-mer GTE Corp. filed four years ago in a bid to recoup its year five insurers. The judge ruled that surance policies didn't cov or the cost of fixing flows in IT systems. New York-heard Veriitions, which now ns OTE's operations, said it's ing its options in the case.

Deloitte Decides

To Keep IT Unit iow York-based Delotte Tox natsu said it's dropping plans to spin off its IT or unit. The company are February 2002 that it we est. But it has conceiled those dans because of the tight credit

Web Services Group

To Take on Security nizedino (MS-I) in Pala to, Calif., said it has not up a ting group to develop pros such as the seco orts and Six

Short Takes

MICROSOFT CORP. later this year ns to release versions of its h unified pricing and packag m. . . . Poway, Calif. of GATEWAY INC. said it wil on the revenue it reported for 2000 and 2001 by a com ed total of \$470 million.

3Com Software-based IP Switch Being Tested

Company hopes high-end product will help its re-entry into enterprise market

BY MATT WANTS BY HIGH-END, softwarebased IP switch from 3Com Corp. is being tested by four large companies for geogral release in August as part of the network device maker's ef-

forte to re-establish itself in the enterprise marketplace. Last week, 3Com CEO Bruce Claffin said the switch will scale to hundreds of thousands of users, compared with the hundreds sup-

ported by the company's existing NBX line. The software switch, or "softswitch," should help Santa Clara, Calif-based 3Com woo back enterprise customers that were abandoned three years ago, Claffin said (see story below). 3Com declined to identify the companies testing the switch.

The softswitch will handle more than voice traffic, including "applications and services that an IP infrastructure can allow you to deliver that are not possible or practical in a traditional telephone environment," Claffin said.

"If you try to sell

VOIP to an enterprise today and justify it on the value-add features, you are unlikely to be successful, because the CEO is saving 'harddollar payback." " be added. 'And the way you get the harddollar payback is to displace the basic telephone services cost inside your business." Claffin said the softswitch

supports both IP and public switched telephone octwork standards, and he claimed that it offers the same 99.999% level of reliability of traditional

will also provide emergency 911 support for locating a user based on his desktop phone instead of the nearest wiring closet, Claffin said.

He said that 3Com itself is one of the beta sites for the switch and that the company expects to reduce its annual voice costs by 70%, partly by eliminating long-distance phone charges. In addition, the company would save on the expense of adding and re-

moving users and by axing conference call costs, which would mean a 13-month payback, Claffin claimed. The development of a highly scalable IP softswitch impressed two 3Com customers who nonetheless said their

operations are probably too small to deploy it. We'd probably benefit from the technology enhancements they'd make in developing it," said Debhi Pryor, CIO at MountainBank in Herylers

3Com's NBX technology and LAN switches, Pryor said. lim Mass, director of technology for the Tahoe Truckee Unified School District in Truckee, Calif., has installed 3Com voice-over-IP gear in 12 buildings that house 4,500 students, but he said his operation is still too small for the

> advocate," he said, adding that he hopes the focus on larger customers "doesn't mean that 3Com foreets about us smaller clients* The softswitch is based on intellectual property developed within 3Com's Comm Works division, which is being sold to UTStarcom Inc. in Alameda, Calif., for \$100 million. The sale lets 3Com focus more on enterprises, since CommWorks targeted net-

softswitch. "I am a real 3Com

work carriers, Claffin explained. To deal with what promises to be an "ugly" economy for two to three more years, he added, 3Com will need to capture market share from other his switch.

3Com CEO Explains Renewed Bid for Comprate Busine

EMC Joins Brocade in Push for Storage Virtualization Technology

Vendors sign deal to put EMC's storage management software on SAN switches

BY LUCAS MEARIAN EMC Corp. last week said it plans to develop storage manment software for a new line of Brocade Communications Systems Inc. switches that support network-based

storage virtualization EMC is the second major storage vendor to embrace the SilkWorm Fabric Application Platform switch technology, which San Jose-based Brocade obtained as part of its January acquisition of Rhapsody Networks Inc. Brocade and Hewlett-Packard Co. announced a similar agreement in January [OuickLink 358261 IT managers will be able to

use the switches, which Brocade plans to sell through

storage vendors like HP and EMC, to manage the devices on multivendor storage-area networks (SAN) as if they were a single entity, a process

known as virtualization. Brocade, the largest maker of SAN switches, acknowledged that the new hardware won't be of any practical use until at least the end of this year, when HP, EMC and a group of seven smaller vendors are due to start making their storage management applications available on

the devices But some IT managers are already saying that intelligent switches like Brocade's are a step in the right direction. Mark Deck, director of in-

frastructure technology at National Medical Health Card Systems Inc., a medical benefits management company in Port Washington, N.Y., plans to use HP's VersaStor storage virtualization software to belo manage his 5.6TB SAN. But Deck said he has run into an I/O bottleneck between HP's Continuous Access Storage Appliance and its higher-speed Surestore xp256 disk array. Once HP nuts Verso. Stor on Brocade's switches. Deck said, he should be able to use the SAN's full IGhit/sec bandwidth to transfer data between the different storage de-

vices, thereby eliminating the bottleneck. Bob Siravo, manager of enterprise storage at drug maker Wyeth in Madison, N.J., is rolling out the latest version of EMC's ControlCenter software to belp manage a 50TB SAN that includes HP and

EMC arrays. Siravo said he thinks the SAN is where storare management intelligence belongs, because it would let him divvy up storage capacity

like an energy utility distributes electricity. But the Brocade/FMC announcement won't preclude Siravo from installing Control-Center, on individual disk arrays and servers. Wyeth has an immediate need to have as much of a common tool to manage the environment as possible," he said

John Webster, an analyst at Data Mobility Group Inc. in Nashua, N.H., said networkbased storage virtualization technology has been available for a couple of years, mainly from start-ups such as Data-Core Software Corp. in Fort Lauderdale, Fla., and Falcon-Stor Software Inc. in Melville N.Y. But Brocade's entry lends credibility to the technology. be added.

Officials at Hopkinton, Mass,-based EMC said the company initially plans to sup port virtualization, dynamic data routing and data classification capabilities on the Brocade switches.

APPLIANCE HPRRADE

HP upgraded its Continuous Access bundle for replicating and regrating date

Financial Firms Seek Revision Of WORM Archiving Rule

Brokerages are lining up against a 12-year-old regulation that requires them to store electronic documents on unchangeable optical media, saying the archival method is too expensive and cumbersome to manage and doesn't necessarily safeguard

The Securities Industry Association (SIA) in late February sent the U.S. Securities and Exchange Commission a letter asking the agency to remove the technologyspecific language from its rule on the retention of electronic records. The rule currently dictates that brokerages store

Industry group electronic records on WORM devices. The New York-based asks SEC to allow SIA last week said it wants the adoption of newer SEC to instead focus on the creation of policies and procestorage technology dures to ensure that important data won't be modified.

WORM, which stands for "write-once, read-many," is an optical storage technology that lets users write data to a disk or tape just once in order to create a permanent, unalterable set of records But Scott Kursman, at

ate general counsel at the SIA,

doesn't prevent brokers from changing documents before they get archived. "If you have controls and procedures around things like access and the archiving environment, would result in a more robust rule than what we have today." Kursman said. He added that

that gets you to a place that brokerages would much rather use technology like EMC Corp.'s Centera fixeddata disk array or inexpensive. high-capacity magnetic tapes.

Working on WORM Time Financial services firms are finding that it can be an "hours-long procedure" to retrieve documents from said the use of WORM devices | WORM disks, Kursman said.

If you have controls and procedures 7 around things like access and the archiving environment, that gets you to a place that would result in a more robust rule than what we have today. SCOTT KURSMAR, ASSOCIATE GENERAL COUNSEL. SECURITIES INDUSTRY ASSOCIATION

Costs to Store 1TB based Enterprise Storage Group, said very few vendors

SOURCE ENTERPORE STORAGE SAOUR

In comparison, documents archived on newer storage devices are instantly identifiable from indexing he said An SEC spokesman said the arency has yet to respond to the SIA's request and added that there is no timetable in

which it would have to do so. The WORM storage requirement dates back to 1991 when brokerages were looking to move away from storing records on paper and microfiche. Ironically, the SEC chose WORM technology in response to a petition from

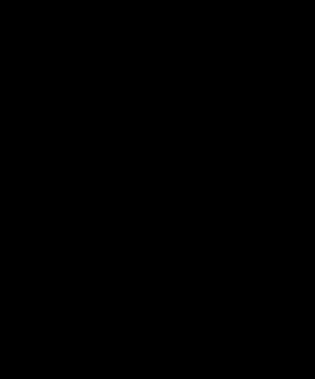
the SIA for a rule that would allow electronic forms of data storage. But Patrick C. Gordon, an analyst at Milford, Mass.

sell WORM devices now. which has left many brokerages to run systems that are no longer supported. Because of the ubiquitous use of e-mail by brokers, and new federal regulations such

as the Sarbanes-Oxley Act. complying with e-mail retention requirements will be one of the most important IT-related issues for financial services firms during the next two years. Gordon said.

In recent months, the SEC has been closely scrutinizing the archiving of communications between brokers and their customers, particularly

For example, the agency in December fined five brokersees a total of 60 % million for violating its e-mail recordkeeping requirements [Ouick-Link 349121.9



Vendors sign deal to put EMC's storage management software on SAN switches

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APPLIANCE UPGRADE

Financial Firms Seek Revision Costs to Store 1TB allow electronic forms of Of WORM Archiving Rule they get archived, "If you Worth of Documents data storage have controls and procedures around things like access and

Industry group asks SEC to allow adoption of newer storage technology

Brokerages are lining up against a 12-year-old regulatioo that requires them to store electronic documents on unchangeable optical media, saying the archival method is too expensive and cumbersome to manage and doeso't occessarily safeguard

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data won't be modified WORM which stands for "write-ooce, read-many," is an optical storage technology that lets users write data to a disk or tape just once in order

to create a permaneot, unalterable set of records. But Scott Kursman, associate general council at the STA said the use of WORM devices

doesn't prevent brokers from changing documents before the archiving environment. that gets you to a place that would result in a more robust rule than what we have today," Kursman said. He added that brokerages would much rather use technology like EMC Corp.'s Centera fixeddata disk array or inexpensive,

high-capacity magnetic tapes. Working on WORM Time Financial services firms are fioding that it can be an "hours-long procedure" to retrieve documents from WORM disks, Kursman said.

If you have controls and procedures around things like access and the archiving environment, that gets you to a place that would result in a more robust rule than what we have today.

SCOTT KURSMAN, ASSOCIATE GENERAL COUNSEL SECURITIES INDUSTRY ASSOCIATION

In comparison, documents archived on newer storage devices are instantly identifiable from indexing, he said.

An SEC spokesman said the the SIA's request and added that there is no timetable in which it would have to do so. The WORM storms on quirement dates back to 1991

when brokerages were looking to move away from storing records on paper and microfiche. Ironically, the SEC chose WORM technology in response to a petition from

the SIA for a rule that would But Patrick C. Gordon. an analyst at Milford, Moss based Enterprise Storage

Group, said very few vendors sell WORM devices now. which has left many brokerages to run systems that are no longer supported Because of the ubiquitous use of e-mail by brokers, and new federal regulations such

as the Sarbanes-Oxley Act. complying with e-mail retention requirements will be one of the most important IT-related issues for financial services firms during the next two

In recent mooths, the SEC has been closely scrutinizing the archiving of communications between brokers and their customers, particularly e-mail transmissions.

For example, the agency in December fined five brokerages a total of \$8.25 million for violating its e-mail recordkeeping requirements [Quick-Link 34912]. D

Handle Corporate Security As Single Entity, Users Say

Stress that IT security can't be divorced from physical, personnel security plans

OMPANIES can im-

prove their ability to detect and respond to both cyber and physical threats by tying their IT security to other aspects of corporate security

But the cultural and business-process changes involved in implementing such a hollstic view of security can be daunting for most corporations, users said here last week at a conference organized by ASIS International. an Alexandria, Va-hased professionals

"The benefits of integrating corporate security with IT security can be tremendous? said Lew Wagner, chief information security officer at the MD Anderson Cancer Center at the University of Texas in

Houston. Coordinating IT security functions with areas such as physical protection facilities management, human resources and legal and audit functions has belped enhance overall threat-detection and incident-response capabilities at the hospital, Wagner said.

"It streamlines corporate investigations. Whenever somebody runs afoul of the policies

Correction

A STORY THAT BAR in the March ws section ("Oracle Modicing, Bundling of Applicatore") reported that Oracle Corp. had renamed its business as s E-Business Suite 2003. hat is the name of a new softeced for the applications: ere itself is still called sens Suits 71

of the institution, you don't have a bunch of people doing stovepipe things," he said A holistic view of enterprise security can belt plus cans that might otherwise be missed, said James Litchko president of Litchko & Associates Inc., a security consultan-

cy in Kensington, Md. Outside Factors

Continued from page 1

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i2 Technologies

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supports i2's executives.

For instance, the majority of IT-related security threats still stem from procedural and process flows - such as fail. ure to secure access to crucial systems, inadequate backups and lack of auditing - rather than from technology glitches, Litchko said. Consequently. it's important to factor in physical and personnel securi-

security, he added. "To some degree, this is

happening naturally as IT becomes intertwined in almost all aspects of corporate life," technology at Evenett Wash based Providence Health

"Even physical security is tied to IT, as all of our electronic access controls feed databases," Rymal said

In the case of the health care industry, regulations such as the Health Insurance Portability and Accountability Act are driving such collaboration further in order to protect patients' privacy. Rymal said. As more computing devices become mobile. "we must guard against not only theft of

the devices but [also] protection of the data on those dodled by finance and risk man-

is in a "tailspin" that will be audit had been expanded to tough to pull out of. "The include 1999, and it disayowed financial difficulties are bad all the numbers it had neevienough, but customer flight is ously reported for that year the real problem," he said. "It's through the end of 2002. The hard to justify spending more company added that it hopes

on i2 technology when the company is looking so shaky" 12, which has reported five straight quarterly losses, said it will continue to cooperate fully with the SEC. The formal investigation follows an informal inquiry into the company's revenue recognition and financial reporting practices

that the SEC's staff began in January [Quick] jek 360041 At that time, i2 CEO Saniis Sidhu said he had 'basic comfort" about the accuracy of the \$12.4 million loss the company reported on a preliminary basis for the fourth quarter. But Sidhu acknowledged that a

planned reauditing of its books by Deloitte & Touche LLP could lead to adjustments of i2's financial results.

Last week, i2 said the re-

tions can also lead to better operational efficiency, said Steve Hunt, an analyst at Forrester Research Inc. in. Cambridge, Mass.

"The greatest sin of all for a CEO is to have different busision so everyone is feeling some pressure to justify what they are doing." Hunt said.

Even so, few corporations are embarking on such a venture, he said. That's because implementing an enterprisewide security and risk management program can be a cultural and business-process challenge, given the silos that security-related functions are

relegated to within many corporations, users said For instance, IT functions may report to a CIO, while facilities management is han-

to complete the reaudit by

early tune but it said it won't

be able to file its Form 10-K fi-

i2's List of Woes

accment and business continuity are handled by yet

another group Connecting these siles can

Tying IT security with other aspects of corporate security can

lead to "better identification and mitigation" of risks, said Robert Gerden, director of corporate and systems security at Brampton Optario-based Nortel Networks Ltd. during a presentation at the confer-

But it can be "very hard to quantify the ROI" on the benefits gained from such integration, Gerden said 1

MORE ON SECURITY

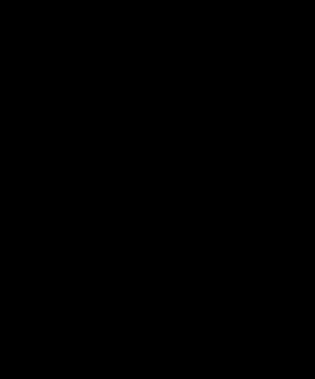
QuickLink 37495

nancial statement for last year in time to satisfy the rules of either the SEC or Nasdau The stock market, which had previously withdrawn a delisting notice to i2, halted

trading of the company's stock until i2 responds fully to a request for more information about its financial status. Another looming issue is i2's potential breach of the covenant with bondholders. If it doesn't finish the resudit process by June, the company will be in violation of provisions that require it to provide timely financial information to bond trustees. As a result, i2 could be forced to pay \$350 million to the bondholders.

An i2 spokeswoman said the various issues dogging the software vendor won't affect its intellectual property or cash position. Company officials "are totally focused on meeting the June deadline" for finishing the new audits, the spokeswoman said b

focus i2 on improving customer satisfaction. The SEC investigation shouldn't affect the quality of the company's products or ongoing installa tions of its software, he said. Greenbaum, an analyst at Fnterrrise Applications Consulting in Daly City, Calif., said 12



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of the institution, you don't have a bunch of people doing stovepipe things," he said. A holistic view of enterprise security can help plug gaps that might otherwise be missed, said Ismes Litchko president of Litchko & Associates Inc., a security consultan-

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Continued from page 1 i2 Technologies

vendor would take over and support its products. Gene Hunt, chairman of the Atlanta-based i2 User Group, said in a statement that the SEC investigation and the other developments will likely "spark a ripple of concern" among the company's users. Nevertheless, Hunt, a member of the technical staff at Texas Instruments Inc. in Plano, Texas, said the user group still supports i2's executives Hunt said the manager

team has been working to refocus i2 on improving customer satisfaction. The SEC investigation shouldn't affect the quality of the company's products or ongoing installations of its software, he said.

On the other hand, Joshua Greenbaum, an analyst at Enterprise Applications Comulting in Daly City, Calif., said 12

is in a "railspin" that will be tough to pull out of. "The financial difficulties are had enough, but customer flight is the real problem," he said, "It's hard to justify spending more on i2 technology when the company is looking so shaky." 12, which has reported five straight quarterly losses, said

it will continue to cooperate fully with the SEC. The formal investigation follows an informal inquiry into the company's revenue recognition and financial reporting practices that the SEC's staff began in January (QuickLink 36004). At that time, i2 CFO Sanity Sidhu said be had "basic comfort" about the accuracy of the \$12.4 million loss the company reported on a preliminary basis for the fourth quarter. But Sidhu acknowledged that a planned reauditing of its

books by Deloitte & Touche LLP could lead to adjustments of i2's financial results Last week, i2 said the re-



SAS Tries to Broaden Its Software's Appeal

SAS Institute Inc. last week announced plans for an upgrade of its data analysis software that will expand a 10month-old effort to simplify the technology so it can be used more widely within companies.

The promised ease-of-use improve-

tendees at the SAS Users Group International annual conference in Seattle

But users will have to be patient. SAS officials said the 9.1 upgrade is in the hands of some early adopters but won't be shipped until a phased release starting Aug. 31. Full availability is expected by year's end.

SAS 9.1 will include a pair of user interfaces tailored for different kinds of end users, based oo their specific jobs and IT skill levels. The addition of the Report Studio and Web Report Studio interfaces is an attempt to reach out to "decision-makers who have experience and strengths in what they do, but not in computing," said Eleanor Taylor, manager of business intelligence strateav at the Cary, N.C.-based company,

SAS is embedding a metadata laver to filter out irrelevant data for end users, Taylor said. SAS is also building in business rules to help users conduct more detailed analyses of data, and it's tightly integrating the software with Microsoft Office so queries can be run from within applications such as

Word Event and Outlook In addition, Report Studio and Web Report Studio will offer wizard technology to help users find information without having to write SQL queries. The same technology is part of a rolebased user interface that SAS shipped in September for more IT-savvy users. Irving Tyler, CIO at Quaker Chemical Corp. in Conshobocken, Pa., said the Web Report Studio tool will let his company's business analysts and managers generate their own reports, freeing Quaker Chemical's IT staff from having to respond to many of the ad

boc reporting requests it gets now. "Our goal is to give people access and let them out information in any format they like," Tyler said. He added that SAS 9.1 could also eliminate the need for Quaker Chemical's IT department to develop specialized data marts that combine information from different systems. "We can just give users raw data and metadata, and they can combine that themselves," he said

The user-friendly enhancements could open up SAS applications to end users who want to run online analytical processing queries but are intimidated by the software's complexity, said Randy Collica, a senior business analyst at Hewlett-Packard Co. HP uses a variety of SAS tools for tasks such as studying customer data.

The upgrade should also help dispel a lingering perception among some potential customers that SAS's products "can only be used by actuaries." said Mike Schiff, an analyst at Current Analysis Inc. in Sterling, Va. 9

Gary H. Anthes contributed to this report.

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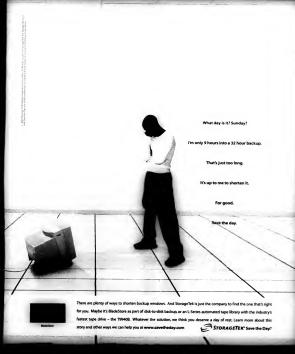


CEO Says SAS Isn't Proprietary

A few days before last week's conf started, Jim Boodnight, president and CEO of SAS, spoke with the IDG News Service. Excerpts follow.

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ou offer a low entry price, i



Sun Bows to Users, Drops Its Own Linux

Sun Microsovatems Inc. is ending a seven-month effort to establish its own Linux distribu-

tion, because of reluctance on the part of users to deal with vet another version of the open-source operating system.

O'Leary said marketing of the Sun Linux 50 software that the company announced last

vor of developing partnerships with other Linux vendors. Sun had positioned its release as nothing but a slightly tweaked version of a standard Linux 2.4 kernel. But O'Leary acknowl-

August is being curtailed in fa- | edged that the company felt pressure from users that weren't interested in having to install and manage multiple versions of Linux Mike Prince, CIO at Bur-

lington Coat Factory Warehouse Corp., where Linux is a big part of the IT infrastructure, said Sun's decision is a wise one, "There's little Sun could add to its own release of Linux that can't be done by companies that are focusing on that," Prince said. "I don't think a custom Linux version

was a value-add. I think it was a distraction." The Burlington, N.J.-based clothing retailer uses Red Hat Linux on many of its systems and has a small amount of Sun hardware in place. Prince said be would be recentive to the idea of running the Red Hat software on Sun servers. O'Leary wouldn't identify the Linux vendors that Sun is talking with about possible partnership deals. No deadline has been set for reaching any agreements, she said.

Uphill Battle Bill Claybrook, an analyst at Aberdeen Group Inc. in

Boston, said be wasn't surprised that Sun changed its direction on Linux so quickly. "I thought they'd eventually have to do it," he said. "It was stupid to try to develop or support their own Sun Linux." Competing with vend such as Red Hat Inc. and the UnitedLinux consortium would have been a tough task. Claybrook added.

Sun's plan made some sens at first because selling its own version of Linux would let the company more closely integrate its Sun Open Network Environment software with the operating system, said Al Gillen, an analyst at IDC in

Framingham, Mass. The problem, though, was that trying to get other vendors to port their applications to a new version of Linux was unlikely to be successful according to Gillen, "That's an uphill battle," he said. "If Sun had a buge market share, it wouldn't be a problem. But

they're starting from zero.")

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here is the in-lower 2022 or brained accessed for complexions. Deli Provincia INSS areas with the 21-Del Shan Mir promises of facilities for all dependent former 2.7.2 has Code Support Program 2022 (recognition to 2022

How much work still needs to be done in the area of Web services? There were two things that were missing from Web services. One was the model for reliable [message] delivery. We [now] get around this by using the reliable delivery mechanisms through the message bus technologies that

are there, and BEA provides those as an alternative. But if you're going to go B2B, when you can't really do that, you really need to have a standard in the Web services stack. Very recently, a standard came out. We signed, along with IBM and Microsoft, a proposal for

Web services reliable messaging, The other one you need is asynchrony. You need to be able to send a message to someone and, when they respond, be able to realize that this is a response to a message you sent out earlier. We do that today, but we do it using SOAP headers, which means the programmers on the other side have to be aware of it.

So the recently published standards for reliable delivery and asynchronous messa; ing are two of the most important ones, in your estimation? WS-Addressing and WS-Reliable Messaging were pretty profound, because these have the potential to effectively make messaging a standard protocol. And once you've done that, all the messaging layers no longer really have the lock-in they cur-

rently have I think those are seminal, as was WS-Security, because those three taken together give me secure, reliable iging, and that's all I need. That's all Web services should do.

Users still express concerns about the security of Web services. How much m work needs to be done on that? I think people tend to worry more about secu-

Web Services Are Coming Along, Says BEA Exec rity than they should now that WS-Security is out there, which is to say there is no perfect solution. Anytime

you build software, there are always security risks to be managed and controlled. And the biggest risk is always people. It's not software. What will be BEA's main focus going forward? Make it easy to manage and

change systems. That's the next thing I hear about from every customer. Total cost of ownership is not just about development. It's about once the evetem is up and running, how do I man-

age it, maintain it, control it in the face of change and in the face of predictability? And that's a key, key thrust for the next big release from RFA

> me of your oustomers have ex-BEA has introduced to achieve its ds. How strong in BEA's coment to standardize those gies? Fundamentally we are going to do whatever it

takes to make sure that these things that improve productivity for the Java community become standards, and that means more investment in the standards process. It means more investment in providing other ways to use these components. It means just more explanation to people about how this stuff works. It means more collaboration

Do you worry that a competitor such as IBM might not adopt some of those standards and the Jam community will become fractured? If IBM viewed them as proprietary lock-in, that would be a problem, and we would worry about it. IBM is in somewhat of the same boat we are. IZEE, in general, has a large competitor these days, and it's .Net.

If you're a I2FF yendor, one of your key focuses is making sure that you have the same developer productivity story [as], or better than, Net. And at least on the enterprise, we think we're better. In order to deliver on that, though, you have to make that a pervasive part of the standard. And at that level, I think - as with Web services - you'd be surprised at how much agreement there is between otherwise very competitive companies.

Are you always watching what IBM is doing? I keep an eye on them, but I don't

obsess. I think more products have failed by far because people were looking over their shoulders when they should have been looking at the customer.

I try and make sure that RFA is. No. 1, focused on the customer and, No. 2, looks at the competition. Our customers are very aware of what our competition does. And if they're doing anything good, [customers] tend to tell us amyway.

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IFE WOULD BE INFINITELY EASIER for IT if there were no such thing as an IT project. And in fact, there isn't. Any project worth doing has to serve a business need, which in effect makes it a business project. So where are the suits when it's time to sit down and justify, prioritize, evangelize and verify the value of these projects?

Sitting safely off in the distance, that's where, For the most part, technology initiatives are still seen and positioned as only IT projects, no matter where the idea, request or money origi nates. This basn't worked to IT's advantage and has instead contributed mightily to the credibility issues dogging IT departments today, It's a vicious cycle, and one that CIOs

have got to get a handle on While it may not be your fault, it is your problem. As Network Services Co. CIO Michael H. Hugos observes. "We are still the propellerhead in the corner of the room with a target on our back. When things go south, who is the easiest person to blame?" But he also warns that "getting into a power struggle with more powerful people is a bad way to get what you want '[Quick] ink

An ingenious way to put the business side's feet to the fire is to establish a joint committee composed of senior IT and business strategists charged with developing an integrated strategy designed to keep all projects on the straight and narrow to achieve their defined business. goals. About 15% to 20% of Global 2,000 companies already have such committees in place, estimates Meta Group analyst Richard Buchanan, And they work.

The payoff can be big. Companies that manage their IT investments most successfully generate returns

that are as much as 40% higher than those of their competitors, according to a November Harvard Business Review article by Jeanne W.

Ross and Peter Weill. These steering committees are "not just project management on steroids," says Buchanan. "It's determining which project we'll actually do, based on its strategic business value and what is

the most efficient engineering sequence in which to do them." The committees do this by de veloping a global view and an overall strategy for all major IT projects, laying out the expected technical and business benefits, enacting IT

projects based on business strategy tracking projects under way, creattne a shared vision of the future technical environment and safely rejecting projects that don't serve these goals. They have the added value of forcing a public commitment and support from the sponsor ing business unit. And as these joint efforts succeed, they build trust between IT and business leaders.

A driving force behind these committees has been the failures of mojor initiatives such as ERP, CRM and supply chain applications. Buchanan says they fail because no one really knows what they were trying to achieve from a business standpoint And he says it's usually the business people who are unwilling to take the

time to do this work. Making these committees successful is laborious, requiring discipline and the support of upper management. But as Meta analyst and CIO coach Doug Lynn told me. "When a CIO goes out the door, it's not that he didn't do the job; it's that he didn't communicate well. The business didn't know what was poing on or why." Which is why these steering committees are a sure bet to keep you in your seat and the

PIMM FOX ASP Redux: It's About

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Service HATEVER hanpened to all those application service

When they first appeared about four years ago, ASPs were going to change the way companies buy and use software. In the process, they were going to make corporete data centers difficult to instife. if not obsolete. Back then, ASPs made outlandish claims that they could provide robust, enterprise-level software and services at a fraction of the typical mainsenance and life cycle costs.

They were maine to be fabulous re-

But stock market reality - and the sinking of marketing budgets - have muted the ASP mes sage, forcing ASPs to cused on their cara-

bilities and less defensive about the

virtues of joint oper ations with a corporate IT center Yes, with many once ampscallable FT budgets under siege. there's reason to re-

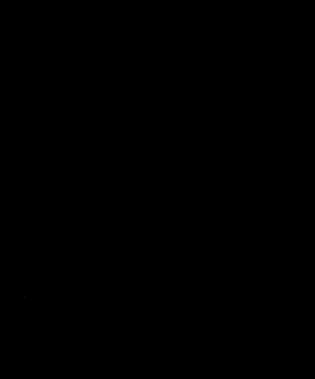
visit the cost-saving benefits of employing an ASP. For example, if you're spending 80% of your IT budget maintaining existing systems, you can't invest heavily in projects that could gencrate new business. An ASP might be able to free up some of those mainte-

nance dollars Good candidates for shifting to an ASP are human resources and payroll systems or a sales automation program. And given the current competitiveness among ASPs, your deal should include software management as well as hardware services. Many ASPs offer packages that include software from Oracle, Siebel, SAP and Ariba, and you can get specific servicelevel agreements that call for financial penalties and technical accountability

ASPs have also dropped their anticustomization positions. They discus-

when things go wrong.





PATRICIA KEEFF

Credibility Insurance

IFE WOULD BE INFINITELY EASIER for IT if there were no such thing as an IT project. And in fact, there isn't. Any project worth doing has to serve a business need, which in effect makes it a business project. So where are the suits when it's time to sit down and justify, prioritize, evangelize and verify the value of these projects?

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that are as much as 40% higher than those of their competitors, according to a November Harvard Rusiness Review article by Jeanne W. Ross and Peter Weill.

These steering committees are "not just project management oo steroids," says Buchanan, "It's determining which project we'll actually do, based on its strategic business value and what is

the most efficient engineering sequence in which to do them. The committees do this by developing a global view and an overall strategy for all major IT projects. laying out the expected technical and husiness benefits, enactine IT portfolio management, prioritizing

tracking projects under way, creating a shared vision of the future technical environment and safely rejecting projects that don't serve these goals. They have the added value of forcing a public commitment and support from the encouring husiness unit. And as these joint efforts succeed, they huild trust between IT and business leaders.

A driving force behind these committees has been the failures of major initiatives such as ERP, CRM and supply chain applications. Buchanan says they fail because oo ooe really knows what they were trying to achieve from a husiness standpoint And he says it's usually the husiness people who are unwilling to take the time to do this work.

Making these committees successful is laborious, requiring discipline and the support of upper management. But as Meta analyst and CIO coach Doug Lynn told me, he didn't communicate well. The

"When a CIO goes out the door, it's bilities and less denot that he didn't do the job; it's that husiness didn't know what was oning on or why." Which is why these steering committees are a sure bet to keep you in your seat and the credibility monkey off your back.

PIMM FOX

ASP Redux: It's About Service

THATEVER happened to all those application service providers?

When they first appeared about four years ago, ASPs were going to change the way companies buy and use software. In the process, they were going to make corporate data centers difficult to justify if not obsolete. Back then, ASPs made outlandish claims that they could provide robust, coterprise-level software and services at a fraction of the twoical maintenance and life cycle costs. They were going to be fabulous, re-

But stock market reality - and the

sinking of marketing budgets - have muted the ASP me sage, forcing ASPs to become more focused on their capa-

fensive about the virtues of joint operations with a corpo rate IT center. Yet, with man

ooce.upassailable IT budgets under siege,

there's reason to revisit the cost-saving benefits of emploving an ASP. For example, if you're spending 80% of your IT budget maintaining existing systems, you can't invest heavily in projects that could generate new business. An ASP might be able to free up some of those mainte-

nance dollars Good candidates for shifting to an ASP are human resources and payroll systems or a sales automation program. And given the current competitiveness among ASPs, your deal should include software man as well as hardware services. Many ASPs offer packages that include soft ware from Oracle, Siebel, SAP and Ariba, and you can get specific servicelevel agreements that call for financial penalties and technical accountability when things go wrong.

ASPs have also dropped their anticustomization positions. They discov-



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George Kadifa, chairman and CEO of San Carlos, Calif.-based ASP Corio Inc., told me that the value of a company like his is most obvious when software becomes more complex. An ASP's real value, then, isn't in its ability to deliver generic software packages. Rather, the value is in the ability to deliver consistent standards of operation, expertise and customer relations to a business in specific areas. If an ASP lets a cookie-cutter approach to IT drive its business, it's probably not a lot of use to you.

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But the best way for ASPs to regain their lost luster is to demonstrate that they provide "service" and not just an "application."

> MICHAEL GARTENBERG

Waiting for Longhorn

IUST CAME BACK from Microsoft's Analyst Summit in Redmond. Together with about 150 of my colleagues. I listened to a lot of presentations, many of which ferred to Longhorn, the code name for the next-generation Windows client. Despite the incessant references to the new operating system,

there was almost no information about it. Still. Loneborn looms on the horizon, and IT planners need to start making preparations now. Prior generations of Windowsclient upgrades focused on issues such as unifying the code base, elimi ting Windows' core DOS roots and improving stability and reliability. Although all of these were daunting ob-

jectives, most have been achieved with Windows XP. The challenge of Longborn will be to add significant functions to the pext generation of PCs while uniting all the divergent technologies that

vere introduced with the XP family, such as Tablet. Media Center Edition Smart Displays, Mobility

In fact, most of these products are scheduled for major updates within the "Longborn time frame" (which is Microsoftspeak for who knows what). This means that not only does the Longhorn team have to create, test and evolve core Windows functions, but it also has to branch in the

code from these other

products for a unified whole. Microsoft has no firm Longhorn ship date. But this summer will mark the second anniversary of XP Microsoft has apparently missed its former target of revising the operating system every 18 to 24 months.

Based on unauthorized builds of Longhorn that have made the rounds on the Internet, it looks like a formal beta for Longhorn won't be ready until at least this summer, with a minimum

The earliest possible release date for Longhorn would then be late summer 2004, with the possibility of that date slipping into 2005 should Microsoft encounter any problems in testing (most likely in areas like security and integration). That means most IT departments can safely not this issue on the shell

of a year in beta testing

until at least 2005. But what about the short term? It's unlikely that Microsoft will let four years

on by between major operating system releases. That means that sometime in the second half of this year we might see an undate of Windows XP on the order of what Windows 98 was to Windows 95. That might include bug fixes. service packs and updates for things like Tablet and Media Center Edition. Call it XP 1.5, if you will.

You need to look closely at your IT infrastructure now and make the transition off of the old 9x code if

you haven't already done so. Keeping a minimum of Windows 2000 with some XP where appropriate is the proper strategy, with a slow-phased XP migration as warranted by machine-replacement cycles-

Microsoft is going to be pushing XP hard over the next few months. Most new software releases and updates will require XP and Service Pack 1 for full functionality, but that doesn't mean you need to be the first oo the block to get it.

Focus on where these features are needed (for example, if you're deploying Tablet PCs, you will need XP and Service Pack 1) and continue to deploy Windows 2000 in other areas that

don't meet those demands. Coexistence of Windows 2000 and XP will be the best strategy until Longhorn makes an appearance and drives another cycle of uperades in

WANT OUR OPIGON?

2005 B

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READERS' LETTERS

The Real Cause of **Employee Burnout** AN AFRAID that columnist Frank

eyes, Meta Group and apper ently 71% of IT managers have missed the underlying issue of aut ("Avoid Burnout," Outck Link 37173]. People are fired, and they're asked to do too many things. at once. No amount of money. training, praise or other incentives

will relieve the mental fatigue that plagues IT shops.

Perhaps Meta Group should ask IT mereoers whether they consider vacation time, sick time, holidays and the current number of active projects when scheduling projects. Do you think 71% will arrower no? West Haven, Conn.

We Pay for Spam

RE PROBLEM that the Direct willing to ignore is that sparn is an edded expense for those who are ed to carry it and those who recoive it l'States Rush to Pass Laws to Fight Sparn," QuickLink 368741. hase expenses should be

by the advertiser and the con-

rier or the recipient. I propose that sparmmers be required to pay carriers a fee of 25 cents for each piece of soom carried. One half of this les would be applied to the reopient's ISP account. With this solution, I should be able to afford a high-Charles J. Linne

The Transparent OS

MARK HALL was right on with his column "Does the OS Matter?" [QuickLink 36387]. Hardnove and operating systems are meant to run applications. The operating system should be transparent. Whether 31-bit, 32-bit or 64-bit - who cares, as long as the operating system is available, re-

crosoft to those with (T shoos that

have a pool of talented people who

Recording for ROI

THE BEST WAY to back up ROI
estimates is to record postproject costs and benefits ("Back ing Up ROL" QuickLink 37/81]. I recently developed a digital project authorization request tool for a GE business that took the estimated. benefits and transferred them to a postproject directory at project and (or when designated, since some

able, scalable and secure.

FT meaning makes

West Windson N.L.

mag:5041@aol.com

benefits may predate project completion). The system was a simple Virual Basic 6/Oracle® application and it wasn't very difficult to use.

Open Source Is Just Another Tool

WE TRIED OPEN SOURCE ["The can make open source work for ther needs. I think there is room for Quick(unk 36438). It can be a good both proprietary and open source in thing, but it con't for everyone. Real the world. Neither is a perfect solution: they're just solutions. D.M. McGowan II business needs very greatly, from companies that profer to work with a well-established vendor like Mi-

Senior software engin Milpitas, Calif.

The supported manager is resu sible for recording these "actuals" and reports to the CFO. It isn't surprising how much

more attention requesters pay to estimates when the results will be documented for the CFO and CFO and will figure into future budgets.

If used correctly, postproject analyses can morove the estimat ing process and aid in determining who should be funded. This isn't punitive, it is merely a tool for allocetion of resources - a manage

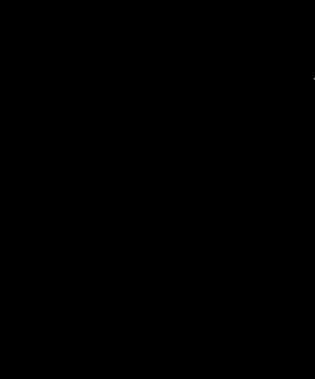
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Web Sites Take Full Measure Web site tools can track performance from the customerfacing front end to the back-end

formance from the customerfacing front end to the back-ensupporting infrastructure. But the systems don't cover everything and are expensive and difficult to set up. Page 30



FUTURE WATCH The Ins and Outs of IT Information technologist and futurist John Parkinson predicts that

futurist John Parkinson predicts that major upbeavals in IT are on the horizon in outsourcing and supply chains — and that operating systems may disappear altogether. Page 33

Directory Glitch Trips Authentication Efforts

Interoperability issues thwart Mathias
Thurman's efforts to use an LDAP-based
directory server for implementing two-factor
authentication in both Unix and Windows
NT environments in his company Page 34

E-mail Upgrade FROM THE GROUND UP

THREE YEARS after beginning a 55,000-user e-mail system upgrade that spans some 50 countries. Rolf Hansmann, director of global e-mail and collaboration services at Awestis Pharmaceuticals Inc.

has reason to celebrate His eight-member global messa group has upgraded more than 162 of the company's 214 Microsoft Exchange 5.5 servers to Exchange 2000 and has migrated more than 94% of all user accounts to Exchange 2000 servers. This spring, as the last user mailboxes finally migrate off Exchange 5.5, Aventis will have an entirely new messaging architecture that requires fewer servers while making e-mail delivery virtually instantaneous across the company, Hansmann says. The new system also introduced Exchange instant messaging and conferencing features, as well as Outlook Web Access for remote users, all of which are popular with users.

But getting there haan't been easy. The project involved more than simply uggrading Exchange servers: it served as the catalyst for a massive redesign of the Bridgewater, NI-based compariy Windows NT domain server infrastructure around Windows 2000 Server and Active Directory, which Exchange 2000 requires to store user account information.

The project began shortly after Hoechst Marion Roussel Inc. and Rhone-Poulenc SA merged to form Aventis Pharmaceuticals' 55,000user Exchange Server upgrade forced a complete rebuilding of its global TT infrastructure that has taken three years to complete. By Robert L. Mitchell



Aventis SA and its Aventis Pharmaceuticals subsidiary in December 1999. The merged pharmaceutical business units both used Exchange 5.5 and Windows NT 4, but the combined company had Il Windows account domains, 150 resource domains and two separate Exchange 5.5, Domain Name System (DNS) and Windows Internet Naming Service infrastructures. In stitching the two together, the Strasbourg, Francebased company created an elaborate web of about 2,000 cross-domain trusts. Hoechast had already been experimenting with Release Candidate I of Exchange 2000 as a Microsoft Joint Development Program partner. Avertitie enlited consultants from Microsolt
Corp. and St. Louis-based Horizons
Consultang Inc. to help with the infrastructure changes. "We wanted all
Windows 2000 domain controllers and
global catalogs set up before Exchange
2000 was installed "says Hartinder".
"Nij" Nijas head of global Active Directory services at Avertis. The team
began in "place upgrades of the NY d
amain controllers and avertis and all
and account and resource domains into
a Bow Active Directory structure.

Although a different group manages Windows servers, the global messaging group kept control of the Active Directory design and domain controller deployments. Active Directory (DNS) naming resolution and Exchange belong so close together that if you don't own that in one group, you will run into big problems." Nijer says. To sneed message deliver, Aventis

used a three-tier e-mail server architecture consisting of dedicated, redundant "connector servers" routing messages and "user servers" handling local mailboxes. Both the Active Directory and Exchange server topology follow the corporate WAN topology. In that way, "you always know what your next hoo is." say Horizon consultant

Henry Creagh.

Hansmann says connector servers
play another key role: "They ... provide language interfaces because we
are providing Outlook in 42 languages."

The messaging group also set up a testing lab with 22 servers that mirrored Aventis' messaging and domain controller topology, befure beginning initial deployments.

Exchange Phases In Avenus upgraded the connector

servers before migrating user servers. The user server rollout involved installing new Windows 2000 machines with Exchange 5.5, moving the messaging databases over and then upgrading the system to Exchange 2000.

But first the messaging team used Exchange 2000's Active Directory Connector (ADC) utility to amport information about user mailbox accounts and public folders from the 5.5 servers into Active Directory. The ADC also beles synchronize mailbox objects with legacy Exchange 5.5 servers. Aventis also had to set up the Site Replication Service (SRS), which emulates an Exchange 5.5 directory, to allow interorerability between the Exchange 2000

and Exchange 55 directories Unlike Exchange 55, Exchange 2000 requires a one-to-one mapping of mailbox and user accounts, and since ADC imports only the first mailbox it ensters, redundant accounts had to be eliminated beforehand, Creagh says. Rooting those out was a time-consum

ing process for administrators, he adds The first pilot, in Kansas City, Mo., consolidated 4,000 mailboxes on nine servers to four machines running Exchange 2000. Exchange's ability to support up to 20 message databases per server enabled the consolidation, as did

AVENTIS' EXCHANGE 2000 SERVER TOPOLOGY

installing more powerful server hardware and moving the message databases onto a Hewlett-Packard Co. SANworks storage area network (SAN). Local backup-and-restore time re-

autrements and backup capabilities. dictated the message database design at each site. Creagh says. "We size it to meet their SLA [service-level agreementl." he says. "If they have an old junky tape drive, we size it for that." In a few larger sites with a SAN, faster

serverios backup technologies can support larger databases, but most message databases don't exceed 20MB to 25MB. Creach says

Aventis specified basic servor configurations, but it didn't make sense to specify server brands or models globally. Hansmann says, Avenus avoided Exchange 2000's clustering.

despite high uptime requirements "Any errors that have been catastrophic have been data corruption," Creach says, "Once you've not corruption, who cares if you've got clustering?" To optimize performance, Aventis also requires mailbox servers to serurate the operating system and Exchange

binaries from log files and data by placing them on separate physical drives. Initially even cores that had antiroly cut over to Exchange 2000 still had to use SRS and its less efficient remote procedure call mechanism to realisate directory information with downstream Exchange 2000 servers. This wasted

bandwidth over slower WAN links. Working with Microsoft, Aventis found a way to let the connector servers handle SRS replication for the user servers at Exchange 2000 sites.

Migration Lessons

Clean the data. Avoid importing Exchange 5.5 information until redundent and disabled accounts are

Own Active Directory, As the repository for Exchange 2000 use over, distribution lists and other ion, the messaging group should be intimately involved in Active Directory design and deployme Train Eschange admini

Administrative tools directly manipu late Active Directory, Admin need to understand the implications # Move quickly, Maintaining a mixed Exchange 5.5/2000 erver ment is complicated and costly.

allowing the sites to use Exchange 2000's support for the more efficient Simple Mail Transport Protocol. Aventis also deployed an Exchange Conferencine Server in Frankfurt to

coordinate online meetings. But getting multicast video support required the messaging group to work with the networking group to configure the routers worldwide - a process that took about a year to complete. Hansmann says both instant messaging and data conferencing are used often, but he laments that many users view the video option, with its tiny image windows, as more of a toy.

Also, he says the NetMeeting client software relies on Dynamic Link Librartes on his Windows 2000 workstations that don't support echo cancellation or background-noise reduction. Windows XP supports it, but not with Conferencing Server, according

Examining the Trade-offs

to Microsoft

Although Exchange 2000 is faster and more reliable, the benefits of the upgrade are mostly invisible to end users Hansmann says. Administrators, however, have seen a big difference. Once the last Exchange 5.5 server cuts over, Exchange 2000 will run in peer mode. allowing more granular control. The global messaging group will take exobstine control of the connector conve infrastructure and delegate user server chores to local administrators.

Hansmann says it will be a relief to do away with the ADC and SRS config. urations, "You need to maintain 5.5 and 2000 simultaneously with ADC connectors and ISRSL which is not easy." he says. "Running these environments beside each other is costly, so it's hetter to upgrade fast."

User server administrators now must use two tools instead of one: Active Directory and a new version of Evchange System Manager (ESM), says Sigrid Vogel, a systems engineer in Frankfurt. She likes the new version of the ESM's Tracking Tool, which is much faster, but she says it lacks some search criteria that were available in the previous version. For example, it can't track messages coming in through one specific connector, she says. Ed Wu, Microsoft's product manager for Exchange, says you can track by sender, recipient message ID, time

Vogel says Aventis also experienced omblems with Exchange message transfer agents failing over Exchange 5.5 to 2000 connections during peak traffic loads. Now servers are moniave reaches a certain threshold. "Microsoft has done work to mitigate this issue in Exchange 2003," says Wu, but a fix isn't available for Exchange 2000.

and server

Maurene Grey, an analyst at Gartner Inc. in Stamford, Conn., pegs the cost of an Exchange 2000 migration at \$150 to \$200 per user, not including the Active Directory migration, But Hansmann says his costs fell for short of that. Server hardware upgrades were due species he easy and he etrotchine out the migration timeline, he was able to complete part of the rollout using existing staff. He estimates that the total project cost including incremental

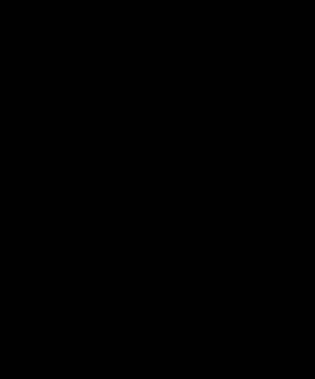
tabor, will be \$2 million to \$3 million. or about \$36 to \$55 per seat. Hansmann measures the success of the consolidated system by its ability to handle extreme message-volume growth. In a 14-month period that end-

ed in October 2002, monthly e-mail message volume doubled to 39 million. or 3.7TB of data. Aventis is already planning an Exchange Server 2003 upgrade to leverage that product's backup-snapshot canability and more efficient remote-access capabilities. "I need these kinds of improvements to stay ahead of my e-mail traffic," Hansmann says.

FIELD REPORT ONLINE

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Exchange Phases In

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Teating Titanium: Remote connectivity improvements of united an upgrade workwhile QuickLink 57427



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TECHNOLOGY

t WAS AN ONLINE retailer's worst nightmare. Most costomers of the Louisville Slugger Museum's online gift shop arrived by way of Hillerich & Bradsby Cock home page for its famous bats, www.

singev.com. But last July, someone uploaded the wrong file to the company's Web size, and for six weeks, all attempts to go to the gift shop from the Louisville Slugger home page were redirected to another company's

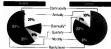
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Caudhill needed something that would alert him to problems faster and from TeaLeaf Technology Inc. in San Francisco. The software tracks Web site activity and sends an e-mail abert when traffic falls below a set threshold. It also captures and logs end used resistant, compares them to established norms for response times and other criteria, and reports system errors and

user errors such as log-in failores. Indeptifica is jurt of a growing farmiby of tools that help Web sire managers, systems administrators, application developers, help devks and database administrators selging, develop, test, monitor, troubbethoot and turne Web based systems. And fillierich fo Bradsby ian't the only company that sece a by ian't the only company that sece to be company that sece to see the self-property of the control of the self-property of the control of the self-property of the self-property of south Parmouth, Mass., the number of communities that continuously monitor

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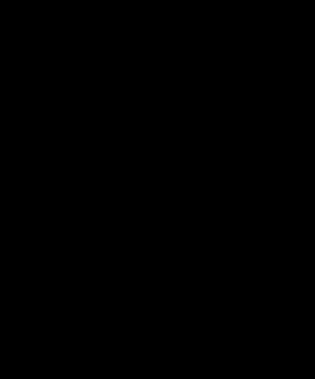
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Some also go outside the firewall, using geographically distributed software agents on remote client machines to look through the eyes of end users are report groblems with local Internet service providers and third parties

such as credit card authorization systems. These can be set up either to simply monitor page-access times or to run elaborate scripts to see, for example, how long it takes to rent a car

Users such as Caudhill praise these tools for their ability to quickly identify — and to some extent diagnose — problems, from slow responses and





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Web site. The glitch occurred in mid-july. End-of month reports showed a reduced activity level, but the company stributed that to other causes. Anothclear that the online thop was getting no home-page referrals. "When we ran the August reports in September, we realized that www.slugger.com didn's read us any referrals, says Christopher Candhill, a developer at Hillerich of Braddley." We knew we had a prob-

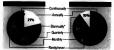
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Integri Tes I part of a growing family of tools that help Web air managers, systems administrators, application developers, help decks and database administrators design, develop, test, monitor, troubleshoot and tune Web-shoot part of the only company that see a med. According to a study last year by research firm Newport Group Inc. in South Yarmouth, Mass., the number of

companies that continuously monitor systems performance rose from just 6% in 1999 to 53% last year (see chart). Performance monitoring and tuning software originated in the mainframe world decades ago. More recently, tools have sprung up specifically for today's multiter, highly distributed. How often does your company review reported data to measure performance?



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Users such as Caudhill praise these tools for their ability to quickly ideotify — and to some extent diagnose — problems, from slow responses and



user errors. But they caution that the software generally isn't cheap or easy to use and is no substitute for having experienced systems people on staff

Agents Are Watching

ninute.com PLC's Web sites receive some 50 million page views per month. The London-based seller of discount travel and entertainment tickets uses subscription services from Gomez Inc. in Waltham, Mass. to watch the performance of its three-tie

architecture in two U.K. data centers. Gernez also monitors the telecommunications services that bring in Lastminute.com users from around the world and the third-party services, such as flight reservation systems, for

which Lastminute.com acts as a portal. Gomez has software agents on PCs in the 12 countries where Lastminute. com does business. At specified intervals — every 15 minutes, say — agents at 20 locations poll a half-dozen or so Lastminute.com Web addresses to test

for end-to-end response time. Lastminute.com also uses a "transactional service" from Gomez that automatically executes a script that mirrors an entire user session. For example, it runs through a hotel booking once per hour, says Brendon Cowell, global technical operations manager at mate.com

"With the reports you get back from Gomez, you can drill down and isolate faults - at the network level, application level or whatever," he says, "Without something like this, identifying the source of the problem would be very.

very tricky." Every 2.5 minutes, software agents maintained by Keynote Systems Inc. on shopping at RELcom and REI-outlet. com, the online stores for Recreational Equipment Inc. in Kent, Wash. Located around the country, the agents execute a five-page script that includes searching for a product, putting it in a shopping basket, entering address and credit card information and so on.

"If they get two failures in five minutes, it beeps me," says Rod Ketchum, record that and give us the statistics. That's really hard to duplicate with inbouse scripts."

In addition to spotlighting problems, San Mateo, Calif.-based Keynone allows REI to do ad boc performance testing. "I can put in a URL - any page at any site - and it will tell me exactly how long each part of the page takes," Ketchum says. In doing that, Keynote acts as a development tool, allowing REI to test the effects of Web page

changes before they're put into production. **Getting All the Numbers**

Ketchum points out that external. agent-based performance monitors may spotlight problems that aren't under the direct control of REL such as an internet provider whose service is down or slow. But the performance naries can be useful when negoti-

ating with Internet providers, he says. "Having the backup numbers is very handy." Ketchum says, "It's like when you go to buy a car and you have all the prices printed out. You can say, 'You can't fool us anymore.' But the benefits go beyond simple

performance summaries. Testing the response time of a Web page is useful.



TIM TALBOT CID PHY ARVAI

but it's more important to have a monitoring tool that can simulate an entire user session, says Tim Talbot, CIO at PHH Arval. The Hunt Valley, Md.

based subsidiary of Cendant Corp. manages fleets of vehicles for corno rate clients and has several Web sites including one for customers. PHH uses the LoadRunner testing tool and the Tonaz performance monitor from Mercury Interactive Corp. PHH worked with Sunnyvale, Calif-based Mercury to write more than 50 scripts to cap ture "the user experience." Talbot says.

The performance goals used by these products must be carefully chosen to match the expectations of users as well as processing realities, Talbot says. "It might take one to two minutes. to run a report," he explains, "but the same report used to take two to three weeks to receive. It might be going

through millions of gas-receipt records, so a two-minute response may be very acceptable." PHH supplements the Mercury

products with more platform-specific tools that can drill down to a finer level of detail. For example, if Topaz says a Windows NT server is slow PMM uses a product from NetIO Corp. in San lose to die out the details. Talbox says PHH could have integrated all of its performance tools but decided that doing so wouldn't deliver enough val-

ue to justify the effort. Despite the help they give, performance tools "are not simple, and they are not cheap," Talbot says. "You can't just say, 'Oh, a couple of weeks to write scripts and we are done.' You have to involve the business to understand what's truly important to them. We've been evolving this for years.

"There are other tools that are much npler, and they are priced according ly." Talbot adds. "But you get what you pay for.")

STATE OF THE TOOLS

Meta Group analyst Corey Fere



CRM With a Family Touch

MyFamily.com turns to RightNow for a self-service system that reduces staffing needs and waiting time

for customers. By Linda Rosencrance

YFAMILY.COM INC., an online genealogy service that connects families with their histories and one another, was beginning to feel the pinch of its own success last year. Providing top-notch customer service was becoming increasingly expensive because the number of subscribers to its Web sites had doubled each year since 1999, according to Jared Richards, call center manager at the Provo. Utab-based compamy Launched in 1997. My Family com is on track to finish this year with 1.6 million customers, he says,

The rising number of customers meant that the number of e-mail inquiries the company received would likely rise beyond the 2,000 to 5,000 already arriving daily - and that the costs associated with customer support would go up, says Richards In order to handle that amount of

e-mail within 48 hours, we had to employ 15 full-time equivalents just to answer e-mail," Richards says. And company officials knew they would need far more employees to handle the increased volume of e-mail.

To save money and improve cuscomer service in the midet of such growth, MyFamily.com in August 2002 deployed eService Center, a self-service CRM application from RightNow Technologies Inc. in Bozeman, Mont. Before MyFamily.com started using RightNow's technology, live customer support personnel handled queries via e-mail. But as the business grew, My-Family.com, like other online companies, began to see the benefits of letting customers find immediate answers to their questions via the Web 24 hours a day, seven days a week. Those benefits include eliminating the need for customer service representatives to answer routine questions, freeing them to respond to higher-level inquiries.

RightNow's eService Center is an



online CRM tool that allows companies to manage customer service problems with limited human interaction. It integrates a single self-learning knowledge base across all customer munication channels, including

the Web, e-mail, chat and telephone. EService Center also includes one. lytics and the ability to measure customer satisfaction through surveys,

says Greg Gianforte, RightNow's CEO. RightNow's eService Center makes it possible for customers to find answers to questions on their own because it uses technology that automati-



cally brings the most requested and relevant information to the top of the knowledge base, says Gianforte. In MyFamily's case, the knowledge base includes more than 400 prewritten responses to common questio Although RightNow hosts eService Center on its own platform for 90% of its clients, including MyFamily.com, it does support Windows NT, SQL Server. Linux, Oracle and MySOL

Richards says that while MyFamily.com primarily wanted to curb its costs. it also wanted to be able to answer customer e-mails faster; its goal was to respond to them in less than a day.

The results of using eService Center speak for themselves, says Richards. MyFamily.com now needs the equivalent of just five full-time staffers to respond to e-mail: and all customer questions are answered within 24 hours. Within 30 days after MyFamilycom implemented RightNow's system. the number of e-mails that employees had to answer personally fell 30%, says MyFamily.com spokeswoman Mary

After adding up the salaries and benefits that would have been paid to cus-



A RightNow spokeswoman says customers typically purchase a two-year license, which can range from \$35,000 to more than \$100,000. However, large, multisite implementations cost well over \$1 million, she says Before moving to eService Center, My-

Knowledge Transfer

Family.com used software from Menlo Park, Calif.-based Kana Inc. for e-mail management and had built its database of responses using Kana's system. But the process wasn't completely automated. "When someone e-mailed us a question, we would find an answer that matched their question and send it back to them." Richards says

Richards says MyFamily.com wanted a less labor-intensive system - and one that would serve customers more effectively. Company officials liked eService Center because of the way it

integrated existing content. "My team and RightNow took the canned messages we had already created and ported them over into Right-Now, and within 24 hours we had it switched over," Richards says. "With RightNow, the customer goes to the Web site and types in a question and is presented with an accurate answer online in a few seconds, so they don't

have to wait for an e-mail." Richards says MyFamily.com looked at other vendors' products before selecting RightNow's offering, but he declined to name the other contenders. He says the company didn't even consider creating its own software because it wanted something it could put

in place immediately. "Since we implemented Right Now,

we haven't had any issues with stability or uptime," Richards says. "Every day we're continuing to build up our database of answers." Bruce Temkin, an analyst at Cam-

bridge, Mass,-based Forrester Research Inc., says a self-service application like RightNow that provides companies with an online knowledge base makes it easy for customers to find answers to their questions. And self-service is important to a company like MyFami become that uses the Internet as its primary sales channel. "When a prospect is online and interested, the last thing you want to do is have them leave your site without some information that they need," says Temkin, B



Van Cumpe

John Parkinson is senior vice president and chief technologist for the Americas region of Cap Gemini Ernst & Young U.S. LLC in Chicago. He recently told Computerworld's Gary H. Anthes

why he thinks IT outsouring and agent-based systems will become ubiquitous, why collaboration software will not, and why data warehouses and operating systems might disappear altosether.

What's the fature of equisocriquit? Teny pears out, there will be less than 100 companies in the world that run their own T.E Evrypone edse will move and more of their IT into what looks it will be a willing model, some kind of buyin its y-the-drink consumption model. There are some things that have to happen for this to catch on big-time. Security and confidentiality of data have to be addressed in a fundamental fashlon. But that's happening.

How will this utility model work? The drive will be to outsourced shared

instances is where bure's bare copy of the software but 20 companies on it. The vendors have figured out that one instance companie (lensing is over because companies work) grower because companies work pay that kind of money anymore. So you take what SAP does and break it into a series of money anymore. So you take what SAP does and break it into a series of services, then each company simply pays for the services if consumes. All the big pays are moving their product architectures in that direction, and it architectures in that direction, and it may be the service of the services of the services of the services in the direction.

What's consing in information security? Vendors, after a decade of pretending it wasn't a problem, have finally figured out it's not enough to put patches out; you've got to make them really easy to apply. We'll see more [automated] enforcement and simpler administration. And there will be role-based

easy to apply. We'll see more [automated] enforcement and simpler administration. And there will be role-based security; when I show up and announce myself, what I get to do is dependent on the role I'm currently playing. This becomes essential, because as

tion

the complexity of technology increases, and as the range of tasks that knowledge workers do increases, it's going to be too hard for you to remember who you are supposed to be for the next 10 minutes. I see a five-year horizon to get all the pieces in place.

What are the pieces? These things will be in the operating system, and there will be security APIs available to any application. There will be standards, like SAML (Security Assertion Markup Language), that applications must conform to or they won't install into your

data center.

What will the arrival of ultradense, very chasp data storage mean? We are within three to five years of having a [portable] device that could hold everything that you'd ever want. Then you don't need centralized storage. You could have all bussiness data basically wortable.

walking around in a huge, bitlion-node peer-to-peer network. There's a strategy called LOCKS (lots of copies keep stuff safel for doing backups. The theory is, if there are enough copies in the network, you can always re-create what you want if you lose it. With a billion nodes, and every node storing a couple of terabytes, it

would be relatively easy to do away with those specialized data management architectures that we have today. What's coming in data mining and analytles? With federated (distributed) data management, we stop needing data warehouses. We have instead embedded analytics, so applications simply

use transaction data on the fly. Over the next two or three years, we'll see a lot of emphasis away from conventional data warebousing and soward the embedded analytics, toward ondemand business intelligence.

Will apart-based systems based on complexity theory become commangiated? Yes, within five or six years, because we are at the limit of what we can architect reliably in a large, complex enterprise. There are too many moving parts. If you try to design it deterministically, you discovery you can't predict all its behavior. This will (maske) obsolete almost all the architecture design

knowledge now in use.

thin

How will sperating systems evolve? One scenario is they will go away, shrink and simply become the DNA of agents — much simplified and localized. The other scenario is the opposite — that

they will subsume almost everything else and become the service-provisioning platform. The service-oriented guys are going for the latter, and complexity theory and agent guys are going for the former, so we will probably end up with a mixture.

What a coming in groupsway/collaboration. We are a long way from having a worthwhile collaboration technology. The problem is the technologies are a worthwhile collaboration technology. The problem is the technologies are we wouldn't normally choose. The we wouldn't normally choose. The we wouldn't normally choose. The sententumar for utility is the telephone. After voloc. «mail gives you about 99% comall gluss intainer mensaging gives you about 99%. The next piece is really have after mensaging they you about 99%. The next piece is really have about 99% in the present we are even thinking about it is because we have so this piece. The present was the present we have so that we are now convincing ourselves that we are now convincing ourselves.

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How night legistics systems evolve? The problem with ERP systems is that they focus on the enterprise. While the real problem is interenterprise. If you can make things work really well across the players in a supply chain, you can produce huge operating—efficiency improvements, and that's where agents come in Suende chain overage well be.

make things work reafly well zerous the player in a supply chain, you can produce huge operating-efficiency improvements, and that's where agents come ins. Supply chain systems will become much more responsive. They will know who's in the store, what they are likely to buy next, what should be on the rereds in transit, what should be on the rereds in transit, what should be concluded to the state of the state of the them. The state of the close to real time. Well have the techlosion to real time. Well have the tech-

The Ins and Outs of IT

A visionary looks to new technology models. By Gary H. Anthes

CRM With a Family Touch

MyFamily.com turns to RightNow for a self-service system that reduces staffing needs and waiting time for customers. **By Linda Rosencrance**

Y YAMIA (180 IN a 20 maline perachapy service that comnects families with their histones and noe another, was beginning to feel the pinch of its rum success last year Providing top-noch customes service was becoming increasingly expensive because the number of subscribers to its Web size had doubted each year raise POO accordable of the providence of the providence ager at the Provo. Chab-based compugater at the Provo. Chab-based compution and the providence of the providence of the providence of the providence of the contract of the providence of the providence of the long through the providence of the providence of the long through the providence of the pr

lion customers, he says.

The rising number of customers meant that the number of e-mail inquiries the company received would likely rise beyond the 2,000 to 5,000 already arriving daily — and that the customer support would go up says Richards.

"In order to handle that amount of

"In order to handle that amount of e-mall within 48 hours, we had to employ 15 full-time equivalents just to answer e-mail." Richards says, And company officials knew they would need far more employees to handle the increased volume of e-mail.

To save money and improve cus-

To save money and improve customer service in the midst of such growth. MyFamily.com in August 2002 deployed eService Center, a self-service CRM application from RightNow Technologies Inc in Bozeman. Mont.

Before MyFamily.com extract using. RightNavi stendonos, five resourcer suprest percentile handled queries via estall. But as the subsisces prox. MyFamily.com. like other online compunies, began to see the benefits of leeting extendors find immediate answers to their questions via the Webthours a day, seven days a weef. Those benefits include climinating the need fire customer service representatives to answer routine questions. Freeing them to respond to higher-level inquiries. RightNow's Service Centure Is an



online CRM tool that allows companies to manage customer service problems with limited human interaction. It integrates a single self-kerning knowledge bose across all customer communication channels, including the Web, email, chat and telephone. Eservice Center also includes anaprites and the ability to measure cus-

tomer satisfaction through surveys, says Greg Gianforte, RightNow's CEO. RightNow's oService Center makes it possible for cusaomers to find answers to questions on their own because it uses technology that automaticause it uses technology that automatically brings the most requested and relevant information to the top of the knowledge base, says Gainforte, In MySamily's case, the knowledge base includes more than 400 presention responses to common questions. Although Right-Now hosts eService Center on its nwn platform for 90% of its elients, including MyFamilycom, it

does support Windows NT, SQL Server, Linux, Orncle and MySQL. Richards says that while MyFamilycom primarily wanted to curb its costs, it also wanted to be able to answer customer e-mails faster; its goal was to respond to them in less than a dre.

The results of using vSet via Cemerspeak for themselves, says Richards. MyFamily.cmm now needs the equivalent of just five full-time staffers to respond to e-mail: and all customerquestions are answered within 24 hours. Within 20 days after MyFamily-.com implemented RightNow's system, the number of e-mails that employees had to answer personally fell 30%, says MyFamily.com spokessomen Mary.

After adding up the salaries and benefits that would have been paid to cus-

tomer service representatives and comparing that figure with the cost of the RightNew license. Richards says MyEmily.com experienced an ROI of 200% in nine months; the company has declined to release financial details.

A RightNow spokeswoman stys customers typically purchase a two-year license, which can range from SM,000 to more than \$100,000 However, large, multisite implementations cost well over \$1 million, she says.

Knowledge Transfer Before moving to eservice Center, My-

Family corn used software from Menlo Park, Callif-based Kans Inc, for e-mail management and had built in database of responses using Kansk system. But the process wasn't completely automated. "When someone e-mailed us a question, we would find an answer that matched their quession and send it back to them." Bishards says.

Richards says MyFamily.com wanted a less labor-intensive system— and one that would serve customers more effectively. Company officials liked eService Center because of the way it integrated existing content.

"My team and Right Now took the canned messages we had already created and ported them over into Rightnow, and within 24 hours we had it switched over," Richards says. "With lightNow, the customer goes to the Web site and types in a question and is: presented with an excurted amover online in a few seconds, so they don't base to swife on an equal."

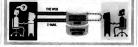
Richards says MyFamily.com looked at other vendors' products before selecting Right/Now's offering, but he declined in name the other contenders. He says the company didn't even consider creating its own software because it wanted something it could put

in place immediately.
"Since we implemented RightNow, we haven't had any issues with stability or uptime." Richards says. "Every day note: provinging to build an auto-

we navent that any issues with stability or uptime." Richards says. "Every day we're continuing to build up our database of answers." Bruce Temkin, an analyst at Cambridge. Mass.-based Forrester Research

bridge, Mass-based Forester Research inc. 299x as 46 Evrice application like RightNow that provides componies with an online knowledge base makes it easy for customers to find answers in the company like My Famillycom that uses the Internet as its priningortant to a company like My Famillycom that uses the Internet as its prinmary sales channel. "When a prospect is online and interested, the last thing you want to do in have them leave your site without some information that they need," says Fernkin. I







John Parkinson is senior vice president and chief technologist for the Americas person of Can Gemini Ernst & Young U.S. LLC in Chicago, He proently told Computer-

world's Gary H. Anthes why he thinks IT outsourcing and agent-based sestems will become ubrauitous, who collaboration software will not, and why data warehouses and operating systems

might disappear altaeether. What's the future of outsourcing? Ten

years out, there will be less than 100 companies in the world that run their own IT. Everyone else will move more and more of their IT into what looks like a utility model, some kind of buyit-by-the-drink consumption model There are some things that have to happen for this to catch on big-time Security and confidentiality of data have to be addressed in a fundamental

fashion. But that's happening. How will this utility model work? The

drive will be to outsourced shared instances - where there is one core of the suftware but 20 companies on it. The vendors have figured out that oneinstance company licensing is over because companies won't pay that kind of money anymore. So you take what SAP does and break it into a series of services, then each company simply pays for the services it consumes. All the big guys are moving their product architectures in that direction, and it will take one to three years to complete that transition.

What's coming in information security? Vendors, after a decade of pretending it wasn't a problem, have finally fire

uned out it's not enough to out natches out; you've got to make them really easy to apply. We'll see more lautomated enforcement and simpler administration. And there will be role-based. security: when I show up and an nounce mi self, what I get to do is de-

cendent on the role I'm currently playing. This becomes essential, because as

Position: Service

Experience: III.

will be security APIs available to am application. There will be standards. like SAMI, Decurity Assertion Markup Language), that applications must conform to or they won't mstall into your data center

> What will the arrival of ultradense, very cheep data storage mean? We are within three to five years of having a

What are the pieces? These things will

[portable] device that could hold everything that you'd ever wang-Then you don't need centralized storage. You could have all business data basically portable. walking around in a bugs, billion-node peer-to-peer network There's a strategy called LOCKSS

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How might logistics systems evolve? The problem with ERP systems is that they

focus on the enterprise, while the real problem is interenterprise. If you can make things work really well across the players in a supply chain, you can produce have operating-efficiency improvements, and that's where agents come in. Supply chain systems will become much more responsive. They will know who's in the store, what they are likely to buy next, what should be on the trucks in transit, what should be in the distribution centers and what should be ordered - all adjusted in close to real time. We'll have the tech nologies to do that within five years 1

The Ins and Outs of I

A visionary looks to new technology models. By Gary H. Anthes

Directory Glitch Trips Authentication Efforts

Interoperability issues derail an attempt to use an LDAP-based directory server for global authentication. By Mathias Thurman

with a project to provide two-factor authentication access to our critical Unix and Windows NT servers. We want to set up a system that requires employees to use SecurID tokens for administrative access to our production Solaris, Windows NT and Windows 2000 servers, but we

have run into a few snaes. The first problem occurred on the Solaris side. Our company uses SECURITY Novell Inc's eDirectory for our corporate TAMBLE 2 directory services. It's based on the Lightiournal a

weight Directory Access Protocol (LDAP). But as we learned. LDAP compliance doesn't guarantee interoperability.

We wanted to configure all of our Solaris servers to point to the eDirectory server for authentication credentials. We considered using special software called the Pluggable Authentication Module (PAM) from Melbourne, Australiabased PADL Software Pty. This set of open-source libraries enables LDAP com munication between Solaris 2.8 and eDirectory. But because of a lack of support from PADL and concerns about compatibility with future patches and software updates, we decided to stick with a supported methodology. In retrospect, perhaps we should have taken the risk The Solaris distribution in-

chides a native LDAP client that's supposed to work with other LDAP-compliant directory servers. In theory, when an administrator logs in, eDirectory should compare the log-in information against its database. If the account has

the proper authorization credentials and a valid SecurID token, the eDirectory server should grant the administrator access to the resource. This setup should work well, since it lets us avoid maintaining local accounts on every Solaris system. We also could have used Solaris' Network Information Service, but we steered away from it because of known

vulnerabilities. Since our company is using eDirectory, it made sense to use the same repository and add an authorization

mechanism to provide centralized access control to our production environment, which consists of 300plus Solaris servers. Right away, we can into a problem with the Solaris 2.8 native LDAP client, Apparently, it has problems prepriating with eDirectory. We contacted the support folks at Novell, and they have confirmed that such problems exist. So much for

This won't be a problem once we upgrade all of our

In theory, when an administrator logs in, eDirectory should compare the log-in information

against its

servers to Solaris 9, since its native LDAP client works fine. But it's going to be at least eight months before we can even start that upgrade. Between oow and then, we have few cetions. We could use Novell's dirXML a hidirec-

tional metadirectory datasharing service that will sun posedly let us use eDirectory to distribute new and updated directory information to our Solaris servers. But if we can't address the problem with Novcll, we'll have to use a different LDAP server for this function.

Netscape Communications Corn's iPlanet directory server works well with the Solaris 2.8 LDAP client, but if we used that, we would have another directory server to administer. This isn't a big deal, however, since only about 30 administra tors will need to be configured

The big issue is political. The e-business group has set up its own iPlanet directory surrous and the architecture group has been trying to get it to switch over to the corporate eDirectory standard. If we bring up another instance of iPlanet, it will give the e-business group justification to keep what it has, So, this week, we will attempt to use dirXML to address our problem.

Enter Active Directory Another problem arose in our Windows environment. To provide centralized pathentication within this environment we use Microsoft's Active Directory, alone with Terminal Services for remote administration Now we want to add SecurID authentication for administrator access. Under this scenario, the administrator would launch a Terminal Services window to connect to a production Windows server. He would theo submit his enterprise log-in credentials (vs. having a local account on the system) and must use a SecurID token before

We store the administrator's credentials within Action Directory, not on the target server. We have over 300 Windows servers, including domain controllers. Exchange e-mail servers and other servers. Back in the NT 40 Senue days, RSA Security Inc.'s Ace Agent worked flawlessly with this configuration. However, that same agent won't work with Windows 2000 and Active Directory Instead RSA produced a special client for Active Directory. We obtained a copy, and everything seemed to work fine as long as we were directly connected to the server at its controle But we use Terminal Services to

access them remotely. Initially, everything seemed to work fine. The Terminal Services client conn the remote server, and up popped s log-on dialog box. We submitted our user names and passwords, pointing to the domain for autheotication. At that point, a separate dialog box should have appeared. forcing us to enter our SecurID

the log-oo process continue. That didn't happen. Instead, the event logs showed a certificate mismatch error, and we were unable to suthenticate to the server, RSA's support group confirmed that this was a problem and said it was "working on it." Until the problem is resolved, we have to disable two-factor authentication

If this is still a problem in a few weeks, we'll have to look at alternative vendors. But perhaps this implementation can be saved. I'll let you know how everything turns out in my next column 9

WHAT DO YOU THINK?

whose name and employer have been him at methos, thurmon Pyghoo com, or on the discussion in our forum. QuickLink #1590





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RRIFFS

Extreme Launches Switch Modules

Extreme Networks Inc. in Sant Clara, Calif., last week announced two new BlackDiamond switch les based on its Tnumph chip set that are designed to improve Gigabit Ethernet switching migration. The G24T3 module has 24 copper ports, and the G16X3 has 16 fiber ports for 10/100/1000 Ethernet. Both scale up to 360 Gigabit Ethernet con ons on the BlackDiamons 6816 switch and feature the T-Control technology for net traffic management. The 024T3 is priced at \$12,995, and the G16X3 is priced at \$13,994. Both are available now

Adobe Acrobat 6 to Ship Next Month

Adobe Systems Inc. in San Jose of Acrobat 6. The new version will support e-mail-based document review and change tracking be able to consolidate changes into Word XP source documents and support public-key infrastructure certificates and digital signatures on e-mailed PDF files. The software will support "oneclick" file conversions within applications and aggregate multip ment types into one PDI file. Acrobat 6 will ship in mid-May. Adobe Elements will cost \$29,000 for 1,000 seats; Acrobat Standard and Professional will cost \$299 and \$499 per seat respectively

Procom Releases

New NAS Filers
Procon Technology Inc. in hvine,
Call. Last week annacunced its
NetForce 4000 series of network-stached storage (NAS) silers with inspreved performance,
storage density and a modular
design. The new file servers come
with a 20battee. Fibre Channel
back and and can scale to a capacify of 32.7E. The 4000 serries will begin shipping this quarter, starting at 313,000.

NICHOLAS PETRELEY

IBM Hires Perry Mason

CO RECENTLY FILED a SI billion lawsuit against IRM. The most notable allegations are that IBM leaked SCO intellectual property to Linux developers and that IBM used said intellectual property to make Linux competitive with SCO Unix in the enterprise. According to SCO, Linux was a toy operating system until IBM "fixed" it. SCO hired David Boise, and IBM responded by hiring Cravath, Swaine & Moore, the firm where Boise had once been a partner. IBM made an excellent choice, but I would have gone with Perry Mason in stead — and not just because of my boyhood crush on Della Street. I have a pretty good idea of how the case would so with Mason on the iob.

Mason (addressing witness): Do you swear to tell the truth, the whole truth and nothing but the truth, so help you Godzilla?

help yoo Godzilla? Witness: Um, I guess so. Mason: Please state your full name.

Witness: SCO.

Mason: Your full name, including any aliases you may have used. And let me remind you, you are under

oath

SCO: The SCO Group, Santa Cruz Operations, Caldera International, Caldera Systems, Caldera Inte., Scoldera, Salt Lake City Operations and Sugarlies.

Mason: Isn't it true that you have so many aliases because you are a Capricorn, and all Capricorns have multiple

personalities?

Boies: Objection! Goating the wit-

ness.

Judge: Sustained. You will refrain from issues of moltiple personalities.

Mr. Thorwald.

Mison: That's Mason, your honor.
I'll rephrase the question, then. Which name were you using when you purchased the Unix intellectual property from SCO in 200P.

SOC Calders Systems.

Matons So when did the
SCO name re-temerge?

SOC in 2002.

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you were able to afford
this rather extravagant
purchase?

SOC We made a pond
bit of money from our fai-

tial public offering.

Mason: Who made this offering?

SCO: Uh, I don't recall.

Mason: Isn't it true that it was the Caldera Systems

IPO that enabled you to porchase SCO Unix? SCO: I don't recall.

Mason: Tell me, what were you doing on the night in question in 1995? SCO: I was purchasing the intellec-

tual property rights to the Unix system soorce from Novell.

Mason: It was SCO that made this porchase, wasn't it? What were you

doing as Caldera? SCO: I don't recall. I think we were

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Mason: Think hard, Mr. SCO. Isn't it true that yoo coined the phrase "Linux for business" on the very same

night?

SCO: I don't know; it's possible. Yes, I think so.

I think so.

Mason: But your complaint alleges
that Linox was inappropriate for business ose ontil IBM infosed it with

SCO intellectual property. Are you saying you lied to your customers?
SCO (nervous, beginning to perspire):

SCO (nervous, beginning to perspire): Yes. No! We weren't lying. Exaggerating maybe. Besides, IBM violated its contract by donating its journaling file system to Linux....

Mason: You are referring to IBM JFS, correct? Is there any SCO code in JFS? SCO (perspiring more heavily): I don't know. I don't real!

Mason: Why did JFS make Linux more appropriate for enterprise ose than, say, ReiserFS, an opensource joornaling file system already

available?

SCO: I don't know. It just was. . . .

Mason: Isn't it true that Linux was already quite successful without the

SCO (panicking): No, nobody was making any money on Linux yet.... Mason: Isn't it true that you made enough money to hire Nicholas Petreley to work on the nonprofit Linux

Standard Base? SCO: That's a clever way to wurk in a disclaimer, but

Mason: And isn't it also true that it was your contribution to the Linux market and the money you made on the business momentum that allowed you to purchase the SCO intellectual property in the first place? Shouldn't

you be suing yourselves? SCO (sobbing): Yes, yes, it's all true!

We confess!

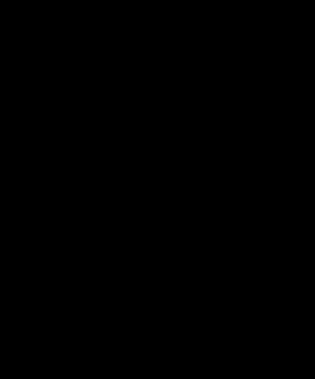
Judge: I rule in favor of the plaintiff,
SCO, which has to pay itself \$4 billion

Mason: Thank you, your honor.

And now I'd like to call my first witness for the next case, Rodan vs. Monster Zero. 8

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Procom Releases

New NAS Filers Procom Technology Inc. in Irvins. rce 4000 series of netstached storage (NAS) filtorage density and a modular n. The new file survers or th a 20bit/sec. Fibre Chara ck and and can scale to a caries will begin shipping to lar, starting at \$153,000

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WANT OUR OP!



mnist John Berry says fear uncertainty and doubt about ROI falling short of its project tions prevent IT managers from conducting postinvestment audits of their projects. Page 43



The Elevator Speech Turn that 30-second elevator ride with the

CEO into a great infomercial about what you and your IT department have done for business users. Page 42

QUOTE OF THE WEEK

Tech jobs were called the golde hammock. Once you got in, you could have a very easy, very, very long career in technology here. - Bill Ferrow, ClO, Chicago Board of Trade

Companies that regularly share code fixes and revisions benefit from more stable and reliable open-source software

BY MINDA ZETLIN

SING OPEN-SOURCE software like Linux is a no-brainer for many companies. It's stable and can be fixed easily if bugs appear, and you can't beat the price. But some companies and government organizations are taking their commitment to open source a step further by actively partic-

ipating in the open-source community. The Linux operating system is only one example of the many pieces of open-source software currently in circulation. In each case, the software's license allows it to be freely copied and distributed by amone, the source code is available along with a working version of the software, and anyone can modify or expand on the code. Most open-source software can be downloaded free from the Internet and is maintained and expanded by a community of developers who donate their patches and modifications.

These days, some corporate and government entities are getting into the act as well. When their developers write patches, modifications or new implementations of opensource software for in-house use, these organizations are releasing that new code back to the open-source com munity, thereby assisting in the software's ongoing development What's the payoff? It makes for better software. "If we find a bug or a problem, we're interested in fixing that problem. We're also interested in not fixing it again in the next version," explains Robert M. Lefkowitz, director of open-source strategy at Merrill Lynch & Co. in New York.

"If you download open-source software, then take it in-house and don't share your revised code, you wind up maintaining your own separate fork of the software for all time," says Eric Raymond, president of the Open Source Initiative (www.opensource.org), a Web-based comprofit group that helps define and promote the open-source

concept, "On the other hand, by participating in open-source projects, you make sure your corporate needs have a seat at the table when large-scale design decisions are being made." This is why Merrill Lynch sent the

fixes it made to open-source software during one of its projects back to the open-source community. "The way a typical open-source project works is that there is a core team in the commi nity with direct access to modifying the code on its central Web site." Lefkowitz says. "People who want to contribute to that community submit their code, which is looked at by a core team and integrated if found appropriate."

Creative Archiving Sharing can be especially beloful if

your software needs are different from those of most organizations, notes lim Willis, director of eGovernment at the Rhode Island Department of State. His office used open-source softy to design a repository for the vast library of content, which ranges from rules and resulations to the minutes of municipal meetings, that the State Department must keep on hand and make available to the general public. A colleague from the state of Hawaii heard about Willis' work and e-mailed to ask his advice about a similar proiect. That got Willis thinking that states could help one another by sharing the





open-source software they had modified for special state uses. "We're now trying to set up Jan online] repositors of which state agencies are using upon source and for what projects," he says. Although the details have set to be fromed out, Willis plans for the states,"

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Best Practices

bot companies that decide to join in the open-source sommunity, there's a right way, and a worng way to go about a right way, and a worng way to go about our iffluintow to any open-source directions to any open-source direction, and the sound count from individual develop-over, rather than generically from the copyroutous. If peneral, people on the open-source contines They want doed with comparent entitles. They want doed with comparent entitles. They want to be a sound to

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For all contributions, Leikowitz camploxics the importance of creating a corporate pulicy, with help from the departments that could be affected by open-soance involvement Al Merrill Regiven Bourd determines when contributing is appropriate. We have reservantly, and con-security, legal, network, achitecture, infrastructure support and prachasing. The stays: "We work through the questions of whenever we want to have engagements and

Having a policy in place is especially important for controlling when and how source code is released, which can have legal ramifications in terms of liability and licensing, says Tony Stance, an attorney and associate di-

rector for Open Source and eGovernment at the Cyber Security Policy and Research Institute at George Washington University in Washington, For example, one large company created a separate foundation for releasing endfor liability reasons. The rules for releasing code vary for different types of open-source software because they are governed by many different types of licenses. But even without a policy. there's a good chance that your company's programmers will share their opensource work - and it might not even occur to them to ask for permission. 'A lot of it woes on under the radar." Stanco says. 'Developers spend a lot of time working on something, and it requires them to do modifications. Because they know it's open-source software, they'll put it out to the communite as a matter of course" But he adds. "that's why we have such great

open-source software."

Zetlin is a business technology writer in Woodstock, N.Y., and author of Tele-commuting for Dammies (Wiley, 2001).

The Leap to

How do you determine your training needs?

Many companies infinity installed Linux for noncritical uses, but now the operating system is frequently being used to run core applications. To keep those applications running smoothly, IT managers must provide their

stall with the recessory Linux expense. The challenge is determining what kind of training will work best in your IT cutture. The following are questions each IT manager must consider when deciding how to establish a training proporate for Linux.

Should IT staff attend formal training sessions? The wide availability of online self-training courses in Linux allowsmany organizations to skip formal Linux courses and instead encourage staff to learn the system on their own, Other managers consider formal training to be essential

Four or live of our lead technologists are currently taking Linux courses," says Martin Armitage, serior vice president and head of the Global Infrastructure Occanization at Uniferent in London "Those four or live will run workshoos for their extended learns of 20 or 30 people in this way, he says, Linux proficiency can "grow like mushrooms" throughout the organi zalion. The consumer-goods grant plans to completely move its global IT infrastructure from Unix to Linux by 2006. By then, Armitage says, 200 people from his IT stalf of 2,000 will be trained in Linux. As this work progresses the company plans to use certification testing to make sure that everyone who's trained is up to speed. Because of the scale of the effort, he

adds. This is better than having people going out and self-teaching (that is, teaming on their own from books and online courses). For Barry West, CIO at the National Weather Service (NWS) is Silver Spring, Mid., the rationale for formal training is that the stakes righty on NWS systems land a wide new meaning.

nale for formal framing is high the stakes riding on WVS syntrem lend a whole new meaning to the term mission-contact. "We're using Linux in an enversionment where time can make the diffusion be between life and death, with fine weighters warring we go out." The explains. The more out staff can be trained, the better off will be." The NWS will need to train more than 120 FT orders in Linux.

■ What about certification? Many If asscrives don't require certification – at least for those on staff, Working hands-on with Lines: the reasoning goes, so a better list of whether you know 4 than a certification exem.

But for others, having staff get certified seems well worth the effort.
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The PGA Tour's use of Linux is relatively new, and so list, the six staff members who work with if have been "picking it up in bits and pieces." Evans says. "As the project moves down the

road, we will need to do formal education and certification." Certification can also reveal what type of framing each staff member needs, says Evan Lesbowitch, presdent of the Unius Professional Institute in Bramaton, On-

lario. "Sometimes il boils down to the individual," he notes. "Some of your staff will need a class, while others do fine reading a book. Certification measures results. Il sottecne studies on their town and then passse the lest. Her clasted defin need the class."

What does your staff already know? "Song Iron Unit to Linux is ske going from Windows 2000 to Windows NT. notes Robert M. Lefkowitz, director of opensource strategy at Merrill Lynch "They're not this same, but the differences are much smaller than the circulation." That transition is harder to undertake for those working on a maintrame, he notes "There's more that's untamiliar."

Even it IT werkers don't know Uso, it helps if they are accusioned to a command-ine environment, such as non-Windows DGS, says. Dave Ernen, technical support manager at Winnebago Industries Inc. in Forest City, Iowa The people who are from a per-GUI environment are learning it lister than those who he worked only in Windows. Ye says.

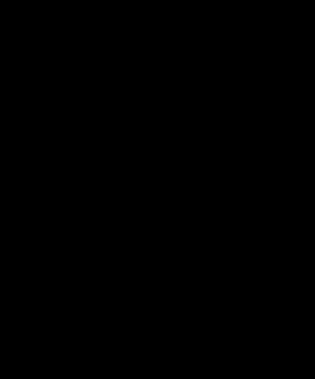
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Linux was installed by a single

Enten says. In fact, they learned to use it on their own time, outside of business hours. Evens says PGA Tour's If staff is excited about Limus hocause it lets them do more, such as write software to help monitor data. In a diflerent environment, Eurass says, they would have held in learned that short fill on a software.

developer. That ability to do more on their own gives them a leoling of empowement, he says. "That einhusissm and energy for learning is more important than past experience," he adds. "Anytime someone's pumped up about learning something new, opport things happen." 9



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er states will also document their work. "Documenting our practices with the intent to share them with others has threefold benefits." Willis notes. "We learn from the experience of other states, we share development resources with other states, and we have better internal documentation of our own practices. All this for the effort of articulating our practices and documentation our internally developed software such that it makes sense to others."

Best Practices

the open-source community, there's a right way and a wrong way to go about it. Raymond advises that corporate contributions to any open-source directory should come from individual developers, rather than generically from the corporation. "In general, people in the

tributions to any open-source attractory, should come from individual developers, rather than generically from the corporation. The general, people in the open-source community don't want to deal with corporate entities. Then deal with corporate entities. They can reach by e-mail. So you need to allow tin-house developers to grow individual reputations. In says. Willis also advises against jumping Willis also advises against jumping

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staff with the reconsury Linux expertise. The challenge is determining what kind of training will work best in your IT culture. The following are questions each IT manager must consider when deciding how to establish a training common for Linux.

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 Are they inspired to learn on their own? One of the most powerful ben

> tion and enthusiaem that IT staff bring to it. At Winnebago, for instance, the move to Linux was initiated by a sing staff member which be come expert all using the system and institute his col-

som memor wo had become export at using the opeters and inspired his colleagues to learn it as well. Erren eags. In fact, they learned to use it on their own time, outside of business hours. Evens says PSA You's IT staff is excited

commonsys. In size, rivey manned in use it on their own time, varieties of business bours. Evens says PGA Tour's IT staff is excited about Litrar because it less them do more, such about Litrar because it less them do more, such se write software to help morellor date, in a different convironment, Evens says, they would have had to hered that job off to an application

have not to helter mer por the survey, developer. That ability to do more on their or given them a feeling of empowerment, he can "That enthusiasm and energy for learning more important them peak experience," he ad

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ones you don't have to think about.



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Chicago Board Of Trade



IT challenges: Restore leadership and build a new relationship with the business side: implement project, budget and quality controls; and replace outdated system with Sun Unix servers and Oracle databases.

The payoff: Completed 66 projects in 2002, compared with no completed projects during the previous four years, and automated the collection of all IT project data.

essons learned: By restoring IT's credibility, other departments (such as operations and real estate) see the benefit of breaking the silo mentality and fostering communication with IT.

ICTURE 3,000 TRADERS in "the pit" way-

ing their hands and screaming orders for stocks, bonds and commodities. Millions of dollars in investments are changing hands every minute. Suddenly, screens freeze: orders won't execute. Mayhem reigns as millions of dollars are lost with every tick of the clock. "That's the worst thing that can happen," says Carol Burke, executive vice president and chief of staff at the Chicago Board of Trade (CBOT). But two years ago, trading-floor systems were crashing almost weekly because of a deteriorating infrastructure. Trading-floor systems capture the Buy and Sell orders, match them with Sell and Buy offers, route

them to completion and send back acknowledgments. The crashes were costing the exchange and its members millions of dollars In July 2001, after two years of operating in the red. the board of directors brought in a new management team, including Executive Vice President and CIO Bill Farrow, A total IT revamp not the exchange back to in-house profitability. By 2002, its profit had risen to \$25 million, trading-system crashes were virtually unheard of, and CBOT was bullish co technology.

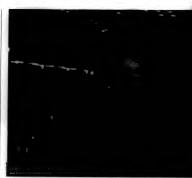
Bear Market

CBOT, established in 1848, is the world's oldest futures exchange. There, more than 3,600 members. such as Cargill Inc. and J.P. Morgan Chase & Co., trade 47 products, including contracts oo agricultural futures and options on U.S. Treasury bonds. The notfor-profit, oonstock corporation has about 600 employees, 200 of them in IT.

Farrow walked into an IT situation that was grim. "The chairman said, Bill, you have very small shoes to fill." he recalls. "That tells you a lot." "IT was in disarray," agrees Burke, a 20-year

CBOT veteran.

"There were a lot of good people in IT, but there was a real lack of leadership," says Chip Bennett.



MARKET

An IT turnaround has brought the world's oldest commodities exchange back to profitability, By Kathleen Melymuka senior vice president of technology solutions and Farrow's first hire at CBOT: The infrastructure was ancient, unreliable and un-

documented. "When I got here, 85% of it was end-oflife," Farrow says. "It was like owning a house and wondering which light bulk owning a house and wondering which light bulk owning but on next." For example, the phone system was 20 years old. "We likerally had to put someone in a van and send him to Colorado to get parts for it." Farrow recalls. Desk-

"We literally had to put someone in a van and send him to Colorado to get parts for it." Forrow recalls. Desktops ran a version of Windows no longer supported by Microstoft Corp. Nearly every key process was routed through a group of old, midrange Tandem counted through a group of old, midrange Tandem computers in an environment so complex that developing a new process took more than 90 steps.

Management, project and budget controls were lacking, and quality control was substandard. Trading-floor systems would crash repeatedly because they were patched but never permanently fixed. 'Tstaffersl were very adept at scrambling and fixing things on the fly.' Farrow says. As a result, most documentation existed only in nooloof's heads.

IT was full of silos and fieldoms, so there were no economies of scale. Morale was low. There was a place called 'the wall,' where nearly 160 yellow silcky notes commemorated people who had gotten fed up and left. But not everyone in IT was frustrated; some were commiscent. Tech jobs were called the golden ham-

mock," Farrow says. "Once you got in, you could have a very easy, very, very long career in technology here." That attitude made no friends on the business side. "We would go to IT and say, 'Help us,' "recalls Kevin Lennou, vice president of real estate operations.

The feeling we got was that we were taking them away from something more important."

Other than Y2k, IT hadn't completed a single project.

ect in four years. As a result, people had no experience in project management disciplines, and return on investment was a foreign concept. "No ROIs were done—ever," Farrow says. "Technology did not have to provide a return for investing the money in it."

There was such a lack of credibility between the business and IT sides that the business people had totally given up. Farrow says. "Their attitude was, Just keep the place going and leave us alone." he says.

The Turnaround Farrow began by taking inventory of what he had.

He documented systems and technical architecture, nailed down vendor relationships and service-level agreements, and evaluated security systems. Simultaneously, he faced the bigger challenge of

agreements, and evananted security systems. Simultaneously, he faced the bigger challenge of building new relationships with the skeptical business people. He assigned IT managers to counterparts on the business side to brainstorm regularly

about how technology could support butters goals. Denite Schaller, diversor of rechnology and data products for floor support applications, who has 21 year? experience at 2007, say leaves to the company year? experience at 2007, say leaves to the company with the two vice presidents of each hape operation has changed everything. "If have any busters appeartions, itsues, priorities — if I'm confused on what my team should be working on — they one it out." she says. "Before, I would have to try to make those judgments areas(if.").

Replacing the ancient Tandems with Sun Unix servers and Oracle databases, a process that Schaller thought would take two years, got done in half the

FINANCIAL RIPPLES

How much money risks on a tradingfloor system? It's hard to calculate, but you can get an idea of the impact if you think of business describtion as a set of concentro triptes. Because of the interplay of those various rings of interest, a market disnuction is bid news around the warks.



Pling 1: The market itself loses the potential fees on all transactions that don't execute. It also loses reverse it could ear from providing market data for traders' workstations.



Ming 2: Broless lose transaction fees. They also take positions while buying and selling in that house accounts, and they can lose big if a system crash prevents them from getting out of an unforceable condition.



major financial institutions loswhen they are unable to hedge a perceived market or business risk by buying a future on a security or commodity.



in the case of agriculture future in the case of agriculture future - loses because he is unable to dispose of the asset. If dispose is time-serialities, he loses ever bigger.



markets, so the absence of activity in one market impacts activity in all the others, and they lose as well.

time because her new partners in business helped with the analysis, legwork and scope. "It's much more consultative," says Leanon. "[IT will] dive right in and try to understand our business needs and help us determine what kind of technolo-

gy can help us."

Farrow boosted quality assurance with additional software testing and backed it up by putting IT

troubleshooters on the trading floor every day when the market opens. "I'm on the spot, so I can see any problems and react immediately," says Schaller. Even so, there were early serbacks. "We had to have

a trading halt a time or two because of some really old issues," Bennett recalls. "That was frustrating, and there were times when I went home pretty low."
But the IT leaders kept the faith. Farrow established a project office to centralize the project portfolio and the IT skills pool. He chose enterprise
change management software from Kiotana Inc. in
Sunnyvake. Calif. to automate processes and provide

real-time status reports on projects.

The office provides a "single point of exary" for demands on IT, Farrow says — "No more backdoor requests or impraye the queen." It signes a broad view of how IT skills are needed and used across the exchange, exabling him to deploy human resources efficiently, it also helps the business people understand IT resources. They want additional staff hours, they can see that If vial at the expense of something else," Farrow explaine. "That's a very constructive dialog to

Farrow also brought ROI to project agendas, "We (know) a lot more in terms of what projects will provide as return on investment," says Bryan Durkin, senior vice president of operations at CBOT.

Farrow used news of the turnaround to attract technology professionals with new skills, particularly in the areas of security and business analysis. But there were painful decisions as well, including letting 15 IT managers go. The permanent IT workforce shrank from 250 to fewer than 200, supplemented by tempo-

rary contract help as required by the project load. The projects have made the business managers believers in IT. With IT constitation, Lumon enhanced and expanded security from just the trading floor to the whole building. "Now real extens and trading floor are interconnected," he says. "Before Bill got here. I finally never would have tried that "Trading-floor and building security would have been separate systems, Lemon signs." "Buf IT!" worked with as from be-

ganning to end. and it's been a phenomenal success."
It has also helped Lennon sort out telecommunications options for the building, which CBOT owns and leases to its tenants, and has even offered to explain the options to new tenants. "That makes the building more attractive to tenants because it's an easy more." The sus-

Durkin is particularly happy with a new masterantenna system for the trading floor. "It gives us an immense amount of growth for wireless technology on the floor," he says. "There's been a phenomenal growth of activity."

In 2002, IT completed 66 projects. In February, CBOT handled 33 million contracts — 33% more than in the previous February without a single system stutter. We have a much more stable and trobust environment with fail-over abilities, sups Durkin, if there were a problem in a primary system, it would fail over to a backup and be essenties to the markerbaice."

Throughout the turnaround, IT has maintained a flat budget. "If you are wasting 35% of your money and you can make that 35% productive, that's a lot of money to put back into the technology to make it robust," Farrow says.

There is also a new IT spirit at CBOT. "I enjoy working for Chip and Bill." Schaller says. "They're very, very supportive. Now that we're accomplishing things, my team feels good about it." b

Melymuka is a Computerworld contributing writer. Contact her at kmelymuka@yahoo.com.



Elevator Speech

Turn a dreaded encounter into an opportunity for some high-level PR. BY KATHLEEN MELYMUKA

Journal ran a column on the dreaded elevator encounter. It discussed the terror many rank-and-file employees feel at the thought of sharing a 30second ride with the CEO or some other top executive for fear they'll commit some career-ending flux pass. Bout with you see the chance encounter as a great opportunity to let them know just what technology has done for

ech

them lately? Why not make sure everyone in IT is ready to grab the opportunity when those doors slide open? "I think the challenge bere is not the elevator speech, but what comes before it," says Mark Endry, senior vice president and CIO at LD. Edwards & Co. in Denver, Your company should have clear goals and objectives: IT should be aligned with them, and each IT employee should know how his own work is beloine to attain them. he says. Endry's managers coach IT workers on this linkage at every opportunity, from performance reviews to events where they play "The Weakest Link* using questions about IT and

company goals.

Speak Business Value
Good metrics can help you pinp

how you're adding value to the business in ways management can easily grasp, says John Bousthy, senior vice president for operations, products and services, and IT at Harrah's Entertainment line. In a Vegas, For example, a belp death person who tells the CEO that his Joh is no solve internal custoted that his point is now the same timper at the the same impact at the one who states that his group has out response that his 30% in the past year and is now closinghalf of its calls no the spot.

Once you understand your business value, get psyched about the opportunity to demonstrate it. "People have to wast to be ready," says Dennis Klinger, vice president of IT at Florial Diwere & Light Co. in Juno Beech, Fia. "They have to realize that this is a good thing to do and agree that if they get the opportunity to do it, they will." A good elevator speech is great public relations for your career as well as for IT he says.

career as well as for IT, be says.

As for the speech itself, a manager
can help with the finanework, but each
message delivered spontaneously will
of course be different. Think about
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include lots of non-TT people, says Virginia Robbins, director of IT at Chela Financial Inc. in Sun Francisco. Select an action verb that truly reflects your role. If you're excited about the project, say so. And it's OK to acknowledge that you don't know all the details. Neither does the CFU.

"Stay truthful, and articulate your

actual contribution," Robbins asys, "And remember, No acronymis" Robbins gives an example of bow even a low-level IT worker can make an impression on a senior executive: "The learning stape-labeling for the customer retention project. Hon't know all the details, bot from what I understand, this will belp retain customers by reducing the time spent responding to the property of th

A programmer might talk about working with he marketing department on the new customer-rewards program that will increase customer populy and market share. Operations people can tie their value to maintaining IT tools that the CEO uses every day. Can he turn on his PC and get the latest balance sheet and data on profitability by customer and product? Not without operations folis.

Keep updating the speech as your job changes, and think topical. When the government upgraded the national security level to 'orange' in February. Klinger's IT group had to segment the network and shut down some areas, with minimal disruption to the business. "That's something that involves profile at every level! he saw." They

network and shut down some areas, with minimal disruption to the business. "That's something that involves people at every level," be says. "They can all talk about that."

The venue doesn't have to be the clevator. Last year, when Endry's chief operating officer beld breakfast meetings.

erating oriest east seasants merculage with employees, the TT people impressed him with how much they keen about their impact on the business. Nor should your audience be limited to the CEOK (Ringer and his higher-level IT people often plan targeted quick-bit imessages for certain executives. Thirty seconds with your chief financial officer, for example, might start a ripple that leads to a new financial eleval.

leave a seed that can cause something good to happen or generate another discussion in more depth. Klinger says. Regardless of the venue, the elevator speech is an opportunity that shouldn't be missed. And by the way, make sure everyone in the department knows what the CEO and other top executives

look like. It would be a shame to waste a perfectly good ride. It Melymuka is a Computerworld contributing writer. Contact her at kmelymuka@wahou.com.

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Officer STEPHEN e. In the end, it will make the s II group ab

How do you preserve your IT train-ing budget? Whenever we get hended a target to save a arrount of money. I keep on saying we can't touch training, Training is usually about 2% of the total head-count cost, so you're not going to save the planet by outting training. I tell them (top managers] that I'll make them happy by

cutting something else. Where are you putting your IT training dollars? We're putting mon

ev into project management training service management training, time management training and courses we developed about knowing yourself and knowing your customers. Most of our people, for instance, had no formei traming around how to deal with difficult oustomers.

Why emphasize customer service? We're setting up our services for unit pricing. Charging back (business units for the [T services they used) started about 18 months ago, The compelling story with anit pricing flow the business units] is, "Use less. spend less," it gives customers the idea that they can control their costs by using less, in IT, unit origing allows us to compare curselves to external providers and elso to compare our-selves internally across different (T centers, which creates healthy comon, say, between New York and

IOHN BERRY

Assume Nothing. Audit Instead

HE IT manager who assumes that a technology investment will meet or exceed an economic or return on investment forecast reminds me of the anecdote about the economist trapped in a burning building. "No problem," he says. "I'll assume a fire hose."

While the dismal science of economics relies on assumptions to build theories to explain economic phenomena. IT managers are under no such obligation. In fact, the practice might be dangerous. One of the most damag-

ing assumptions an IT manager can make is that the cost savines or revenue increases forecast in an ROI exercise will materialize on schedule, or at all. Yet it happens all the time How else to reconcile the fact that most organi-

zations doo't bother to confirm that all the economic returns depicted in a forecast actually materialize? Too often, the effort invested in constructing such a forecast as a decision-making tool becomes digital dust on some one's hard drive after the project has gone live. The thinking goes: The forecast is irrelevant because the proj-

ect is done - let's move on. What's likely lurking behind the absence of postinvestment auditing at most companies is fear, uncertainty and doubt that the real-world results will fall below forecast. No one enjoys evaluations, especially when the outcomes are less than expected, and people in a position of accountability - the project champions and those who cootrol the budget - fear a

metaphorical courtyard stoning. There are ways to conduct a content, repeatable postinvestment audit, and no one need fear being shot at dawn. If you accept the lofty principle that one of employees' most powerful capabilities is the ability to learn and to turn the learning process into improvements, then you should see audits as an effective component of IT management.

The maximum value om an IT investment isn't realized from simply confirming that the returns match the forecast but rather from improving the technology asset's performance should it turn out that the returns are lower than planned which is often the case with more

strategic kinds of technology require ing process and organizational change. The act of investigating why some element of the deployment isn't returning the projected cost savines or increased revenue is the first step of the remediation process by which maximum value is extracted from the technology. This might be the single strongest argument for devoting the time and money to an auditing

Consider the example of a hospital that decided to expand its lab business. Instead of doing the lab work of hospital patients only, it took oo referral business from physicians and clinics as a way to increase revenue by leveraging unused lab capacity in the off hours. This was a big-risk, big-payoff project, involving an investment in people, processes and technology an ideal candidate for a postinvestment forecast validation exercise.

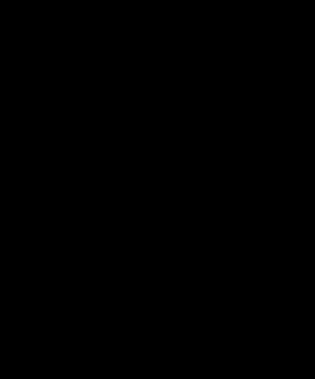
The hospital correctly anticipated that the specialized lab management software it rolled out to support this veoture might introduce some business-process incompatibilities that could drag down forecast ROL However, it had little visibility into what those exact incompatibilities would look like and how they would affect returns. The hospital's IT team decided to conduct an audit concurrent with technology deployment. It could have waited to audit the returns until some point after deployment, but the risks were high enough that it sought to catch any operating dysfunction

auickly. The audit team discovered soon after the platform went live that the software collected far more data than it needed for referral patients. The system required lab workers to capture 20 data elements from each patieot with a lab order. This demanding screening process was optimized for in-hospital patients, but for referral patients, the lab really needed only s few pieces of information such as

name, age and insurance carrier. The dysfunction wasn't catastrophic, but it clearly could have compromised the volume of referral patient traffic the lab was equipped to handle. Having discovered through an audit the operational tension between the needs of the referral patient service and the informatioo acquisitioo overkill of the software, the IT organization recognized the potential drag oo revenue and went to work immediate. ly oo a code fix.

Today, this reference lab is a \$7 millioo profit ceoter for the hospital. In the absence of an audit canability in would have been less profitable, because lab personnel would continue to grill patients as if they had committed a crime rather than sotten sick.

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lay. Its 2003 down 30% from

its IT training budget has resined intact, targety due to the roe lobbying efforts of Chief or Officer STEPHEN NORMAN. Norman says IT man rs must distinguish between t-cutting exercises. Training he says, is a bodybuilding exercise. In the end, it will make the mpany's IT group stronger.

terworld's Julia King. How do you preserve your IT training budget? Whenever we get hand ed a terget to save x amount of money. I keep on saying we can't touch training. Training is usually about 2% of the total head-count cast, so you're not going to save the planet by cuthas branch I tell them floo man-

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Continued from page 1 **Airlines**

ington International Airport at far less cost than expanding the number of ticket counters. Monte Ford, CIO at American Airlines Inc. in Fort Worth, Texas, said IT projects that aren't focused on increased productivity customer self-service and Internet functionality have been "slowed down" at the airline.



Delta spokeswoman. Solaris 8 operating system, Sun Open Net Environment (ONE) application server, Sun ONE Active Server Pages software, Sun ONE messaging server for 200 mailboxes and Sun ONE directory server with up to 200,000 entries.

Haff said. Also included in the stack is Sun's SunScreen firewall technology and basic virtual private network support. he added. "One of the things that Sun

can differs from some other

time stewing over ROI oum-

airlines in its approach to ROL

Many IT departments spend

bers that will justify their exis-

tence," he said, "Not at Ameri-

can. My staff and I implement-

ed a portfolio management ap-

proach to all IT projects nearly

two years ago, and it took the

sucsswork out of determining

portfolio management divides

all IT projects into categories

that are aligned with the com-

pany's business objectives. "As

a result, we can quickly see which projects will have immediate impact on the busi-

ocas vs. projects with long-

way, "there is no need for

cial circumstances,"

knee-jerk reactions to finan-

Atlanta-based Delta Air

Lines Inc. hasn't backed away

has also refocused on ROI and

projects that offer clear bene-

"We're focusing on those

projects that enhance Delta's

core business processes, infra-

structure and productivity and

months," said Betsy Talton, a

fits to the bottom line.

have an ROI of 12 to 18

from new IT projects. But it

term payback," Ford said. That

which projects to work on." American's approach to

is certainly trying to play up is the value they are offering with this whole bundled approach," he said.

projects that "simply add grapularity to systems that already exist," he said. TSA Standardizes on Oracle However, Ford said. Ameri-

ation (TSA), working h its prime contractor. es Corp., avviounced that it has tapped Oracle Corp. to

on its infrastructure or for the TSA, has entainahed a licensing agreement to roude the OracinGl Detabase th Reel Application Clusters and

OracleSt Application Server softwere to the TSA. The agency will ploy Oracle CRM applications from the Oracle E-Business

Through what Talton called "transformation" projects, Delta plans to realize nearly \$1 billion in savings this year as part of a companywide profit-improvement initiative designed to save \$2.5 billion by the end of 2005. Many of the changes being implemented are technology-driven, said

Talton For example, this year Delta will deploy more than 400 self-service kinsks at 81 air. ports, bringing its total to more than 800 throughout its Gary Kelly, chief financial officer at Dallas-based South-

out and incident tracking. Oracle Consulting will build a portal for TSA's intranet using Or actes! Application Server Portal. The TSA is one of the 22 feder

al agencies that now make up the partment of Homeland Seco The Oracle deal armounced to day is part of the TSA information schnology Menaged Services regram Contract, awarded to Unitsys in August 2002. The contract will supply IT infrastructure support for the TSA's finish offices.

nd headquarters. Dendra O'Sulliven, a ISA

Southwest receptly into

passes, kiosks and automated

Ron Kuhlmann, vice presi-

management consulting unit

lines are burdened by back-

than 20 years old. And while

end systems that are more

duced automated boarding

bag tags, said Kelly.

spokeswoman, said the intrestructure management project is a sive undertaking that spans 429 commercial airports. Steve Parkins, surnor vice need-

ident of Orecle's public-sector and homeland security division, said the TSA program is a first step toward the integration of the agen-cies within the Department of Homeland Security.

The TSA deal follows similar Oracle-based projects at other Department of Homeland Security organizations, such as the U.S. Coast Guard, which curchased Oracle's Real Application Clusters. Application Server and socu-

rity options last May.

west Airlines Co., said that many have expressed interest the carrier is also focusing on in replacing those systems projects that will improve cuswith modern, open architectomer service and overall effitures, doing so would require ciency, but he added that overinfrastructure overhauls that all IT budgets and head count none of them can afford right will likely remain flat for the more he said next two to three years.

The new kinsks, wireless systems and other enhancemeets "are only as good as the core data stored on the legacy systems," Kuhlmann said. Eventually, those systems will

dent of the R2A transportation have to be replaced." But not anytime soon. "The of Unisys Corp., said many airnice-to-have stuff is on our road map," Beery said, "But

we're not going to fund those projects." gap with rivals in the area of

Continued from page I Sun

around \$2,995. The V240 can support two processors and up to SGB of memory and features more expansion slots and disk space. Pricing starts # \$3.495

Both systems will also come with a full stack of preintegrated software that Sun hopes will be a crucial differentiator in the low-end space. according to another source close to the announcement. That software includes the

The problem is that what Sun is bundling may not always be what users want, said Eric Greenwade, a fellow at the Idaho National Engineering and Environmental Laboratory in Idaho Falls. "On the surface, it doesn't seem to offer us anything that we aren't getting out of our [Advanced Micro Devices Inc. Athlonl Linux boxes," Greenwade said. But the integrated approach could make a lot of sense, es-

pecially for corporations that want to standardize on Sun technologies, he added. On the storage side, mean

while, Sun will introduce its StorEdge 6120 and StorEdge 6320 systems, which will be the first products in a new family of StorEdge 6000 Fiber Channel RAID products. The products will feature virtualization and provisioning technologies from the company's acquisition of Pirus Networks inc. last year. The technoloing them across multiple ap-

gies are aimed at letting users better utilize their storage resources by pooling and sharplications. Sun's efforts in this area are aimed at helping it close the

storage management canabilities, said Anne Skamarock, an analyst at Enterorise Management Associates Inc. in Boulder, Colo. "Sun is a latecomer in this space, but they are doing a really nice job of catch. ing up," she said. Sun will also announce

price cuts for several of its low-end hardware products. sources said. Prices for the Sun Fire 280R, for instance, are being rolled back by up to 40%. Also included in the price cuts are Son's Sun Blade 2000 workstations.

IT Plans: Stop or Go?

UST WHEN WE THOUGHT the budget purse strings for IT projects were beginning to loosen, word comes that they're about to snap tight again. Last week, Morgan Stanley chief economist Stephen Roach told his clients that he now predicts a worldwide recession in 2003, triggered by war, the rapid spread of the "mystery virus" SARS, uncertainty and economic imbalances.

Or maybe it won't happen. Other economists figure the chance of a new recession is still less than 50%, especially if a quick end to the war in Iraq generates optimism that jump-starts the economy.

Economic indicators in February and March, even before shooting started, were pretty dismand. Consumer confidence plunged, manufacturing ahrank, and payrolls were slashed. That's showing up in IT hiring plans as well — they've shrunk by 26% since last fall, according to a survey by Dice Inc. and the Information Technology Association of America (see store, page 9)

On the other hand, we've recently been been and the instruction of America Gees story, page 9). On the other hand, we've recently been bearing that CEOs are starting to understand that it's time to invest in IT again. Projects that have been on hold are being given a green light. We're finally getting a chance to show once more how IT can help grow the business.

So which is it — a new recession or the start of a robust recovery? Time to restart those projects, or time to batten down the hatches for a regum of 2002?

Sure, you'd love to be optimistic and just decide things will get better. But you don't know that. And you won't know until it's too late to

change course.

You need to prepare for both possibilities.

If you're taking projects out of mothballs, you've probably already begun. You're looking at how well those projects you originally planned to do last year still match up with your business needs

and technology options.
After a year or so on the shelf,
some projects no longer make business or technical sense. Other usiness or technical senses. Other usiness or technical senses. Other usiness or technical senses. Other usibusiness processes have changed,
better technology has arrived, or
products you were planning to usno longer exist. Still others may
have changed priority, lost their
sponsorship because of political
shifts or layoffs, or simply dropped

off the radar of people who once backed them. So while you're figuring out how to refactor these projects for the situation you're in today, take the next step: Refactor them for the possi-

bility you'll have to mothball them again.

Which projects look like they'll produce payback fastest? Which ones have backers too powerful to buck? These are the projects you may

back tastest? Which ones have backers too pos erful to buck? These are the projects you may not have to suspend, especially if they can be rolled out before a downturn hits. Which projects will use stable, mature tech-

nology? Which ones solve classic business problems for your industry? Which ones have sponsorship from political survivors? These are the ones you likely won't bave to junk if they're stopped and restarted.

For the rest, which parts of the projects are the least volatile? Which are the most flexible or reusable? Sketch out your project plans so these parts get done first. They have the best chance of surviving another year if things come to a screecbing halt.

These may not be the projects you'd like to build, or the ones you think are most important. This may not be the way you'd prefer to do

those projects. But this is how you'll be least likely to have wasted work if the economy heads south and your projects have to go back into the deep france.

Don't let your optimism get the better of you. Build contingency plans into the projects you're restarting — with an eye toward the real possibility of another recession this war.

That way, whether your CEO comes to you with a bigger pot of money or slashes your budget to shreds, you'll be ready.



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